

MANUFACTURERS' RECORD

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BALTIMORE, AUGUST 6, 1908.

Illustrative of the wide circulation of the MANUFACTURERS' RECORD, and how readers consult all its departments, is the following letter from Mr. Edwin L. Seabrook, president of the National Association of Master Sheet Metal Workers of the United States, No. 2213 Chestnut street, Philadelphia, Pa.:

You will recall that about a year ago our association was carrying an advertisement in your MANUFACTURERS' RECORD showing the merits of tin roofing, also advertising for distribution, free of charge, the Tin Roofers' Handbook. Some few weeks ago the writer received a request from Mansura, Egypt, for a copy of the Tin Roofers' Handbook. Being interested as to where this mill-owner in Egypt secured his information about this book, I wrote to him, and his reply was that he had read about the publication in the MANUFACTURERS' RECORD.

FOR EMPLOYEES' WELFARE.

In connection with the announcement that a number of mills in the Spartanburg (S. C.) neighborhood will close down temporarily this week, the *Journal of Spartanburg* states that the managements of the mills will give the operatives free house rent, and that one of the mills will pay its operatives half-time. It is expected that with this kindly provision the operatives will not find life a hardship during the shut-down. They certainly will not be inclined to give ear to salaried professional agitators of the country, who for several years past have been endeavoring, under one guise or another, to disrupt the pleasant relations existing between mill managements in the South and their employees. Sociology, turning upon Southern mill conditions, seems to be limping nowadays anyhow, but there

is enough "social reform" rampant to prevent the necessity of the salaried professionals to engage in productive labor for a living.

COMMERCE AT SOUTHERN PORTS.

In an analytical comparison of the figures of American export trade in the calendar years 1906 and 1907 the MANUFACTURERS' RECORD pointed out last February that there was evidence of a decreasing importance, perhaps temporary, of the Southern ports in American commerce. For instance, in the fiscal year ended June 30, 1907, the increase in the value of exports from Southern ports over the value in the preceding fiscal year was 14.3 per cent., while at all other ports of the country the increase was but 4 per cent., but in the 12 months of 1907, while the increase at all other ports was 8.9 per cent. over the value in the 12 months of 1906, the increase of Southern ports was but 3.6 per cent. The figures of the fiscal year just ended, June 30, 1908, compared with the figures of the preceding fiscal year emphasize this reversal of the relative positions of Southern ports and other ports of the country. They are as follows:

Districts.	1907.	1908.
Alexandria, Va.....	\$2,500	\$2,500
Baltimore, Md.....	\$104,808,952	\$9,988,505
Beaufort, S. C.....	75,210	181,900
Brunswick, Ga.....	11,235,477	12,397,838
Charleston, S. C.....	1,082,466	2,510,965
Fernandina, Fla.....	8,655,234	8,659,118
Georgetown, S. C.....	34,732	25,702
Newport News, Va.....	14,932,671	8,365,886
Norfolk-Portsmouth, Va.....	8,359,445	12,534,632
Richmond, Va.....	18,474	151,301
St. Johns, Fla.....	783,799	815,152
Savannah, Ga.....	63,039,824	61,695,339
Wilmington, N. C.....	18,566,468	30,291,681
Apalachicola, Fla.....	329,522	219,930
Galveston, Texas.....	237,368,494	161,352,201
Key West, Fla.....	1,000,182	764,017
Mobile, Ala.....	24,468,719	27,983,997
New Orleans, La.....	170,562,428	159,455,773
Pearl River, Miss.....	8,645,919	7,555,843
Pensacola, Fla.....	19,218,433	20,333,978
Sabine, Texas.....	2,783,689	12,964,644
St. Marks, Fla.....	1,686,123	1,945,144
Tampa, Fla.....	3,269,569	3,776,609
Brazos de Sant., Tex.	206,581	192,257
Corpus Christi, Texas.	15,765,555	11,158,277
Paso del Norte, Texas.	11,362,019	8,650,921
Saluria, Texas.....	6,675,060	4,517,615
Total.....	\$734,264,035	\$648,098,715
All districts.....	\$1,880,851,078	\$1,800,773,346

These figures show that though the value of exports from all other ports of the country increased from \$1,146,587,043 in 1907 to \$1,212,674,631 in 1908, or by \$66,087,588, equal to 5.7 per cent., the value at Southern ports decreased from \$734,264,035 to \$648,098,715, or by \$86,165,320, equal to 11.7 per cent. There was an increase of \$79,946,377 at North Atlantic ports, of \$2,117,400 at Pacific ports, of \$1,489,575 at Mexican border ports outside of the South, and of \$1310 at interior ports, and a decrease of \$17,527,134 at Northern border and Lake ports, leaving a total increase of \$66,087,588 outside Southern ports. These showed decreases in all the divisions, \$3,955,243 at Atlantic ports, \$9,489,135 at Mexican border ports and \$72,720,942 at the Gulf ports, the greatest decreases being at Baltimore, Md., from \$104,808,952 to \$9,988,505, or \$14,820,447; New Orleans, La., from \$170,562,428 to \$159,455,773, or \$11,106,655, and at Galveston, Texas, from \$237,368,494 to \$161,352,201, or \$75,956,293.

Part explanation of this decrease at

Southern ports, making the total decrease at all ports of the country from \$1,880,851,078 to \$1,800,773,346, or \$80,077,732, is the falling off in the value of the products of the cotton plant. That includes a decrease of \$43,489,595 in raw cotton, \$7,127,654 manufactured cotton, and \$5,173,179 cottonseed meal and cake, a total of \$55,790,428, with an offset of \$152,048 cotton oil and \$43,720 cottonseed, a total of \$195,768, leaving the total decrease \$55,594,660. The accompanying table, dealing with about 99 per cent. of the raw cotton exported, throws light upon the changes in the total exports at Southern ports:

Districts.	1907.	1908.
Baltimore, Md.....	\$8,698,494	\$6,627,203
Brunswick, Ga.....	7,451,285	9,883,538
Charleston, S. C.....	1,063,865	2,322,983
Newport News, Va.....	267,308	89,344
Norfolk-Portsmouth, Va.	291,301	1,985,227
Savannah, Ga.....	48,655,605	49,394,821
Wilmington, N. C.....	17,515,125	29,901,200
Galveston, Texas.....	193,551,306	130,208,906
Mobile, Ala.....	8,774,741	14,188,599
New Orleans, La.....	109,793,122	106,118,908
Pensacola, Fla.....	8,254,120	9,966,036
Sabine, Texas.....	788,236	6,441,261
Corpus Christi, Texas..	30,020	43,977
Paso del Norte, Texas..	21,080
Saluria, Texas.....	20,123
Total.....	\$405,124,578	\$367,813,306
All districts.....	\$61,488,583	\$27,837,817

Another illumination is given in the decrease at Southern ports in the value of meat and dairy products and food animals, shown in the accompanying table, dealing with about 91 per cent of the products:

Districts.	1907.	1908.
Baltimore, Md.....	\$14,553,173	\$11,693,860
Newport News, Va.....	2,486,215	227,664
Norfolk-Portsmouth, Va.	1,496,259	1,400,634
Galveston, Texas.....	3,366,158	2,984,831
Mobile, Ala.....	1,818,866	953,438
New Orleans, La.....	6,540,363	4,111,323
Total.....	\$30,261,034	\$21,371,750
All districts.....	\$14,579,143	\$9,692,014

All down the list, however, and not merely at Southern ports, there was a halting in the country's export trade. Leading articles showing gains were comparatively few, and the gains were comparatively slight. They included breadstuffs, \$31,139,886; mineral oils, \$19,260,725; copper, not including ore, \$9,302,470; coal, \$4,627,988; iron and steel, \$2,451,311; fertilizers, \$2,374,220; cars, vehicles, etc., \$1,559,495, and unmanufactured tobacco, \$1,349,759. On the other hand, there was a decrease in manufactured tobacco exports of \$999,091, and among the other decreases for the whole country were raw cotton, \$43,489,595; meat and dairy products, \$9,589,800; manufactures of cotton, \$7,127,654; animals, \$7,101,791; cottonseed cake and meal, \$5,173,179; manufactures of leather and leather, \$4,788,350; fruits and nuts, \$3,249,568; scientific instruments, \$2,083,445; woods and manufactures of wood, \$1,828,270, and manufactures of fibers, \$1,082,314.

"TALKING POLITICS."

The Tampa *Morning Tribune* does not like an editorial which appeared in a recent issue of the MANUFACTURERS' RECORD. It takes particular exception to the following paragraph in the editorial:

Some years ago the writer was in one of the busy, bustling towns of Alabama, a town which at that time was growing as few towns in the South had ever grown. During his stay of some days not a word was heard

of politics, not a line concerning political affairs was seen in the local papers. When he spoke of this striking fact to a citizen of the place there came in reply to the inquiry as to this condition the statement, "The people of this town are too busy to talk politics." What a blessed thing if such a condition could exist throughout the South! The people of that town were not only busy in building furnaces and machine shops, cotton mills and other industries, but they were busy in building schools and churches, and during that period of prosperity that town probably built more fine churches in proportion to population than any other town or city in the United States, in the construction of water-works and electric-light plants, good stores, splendid homes and in every other line of work which meant human advancement. But they were "too busy to talk politics." May heaven grant that the time shall soon come when that spirit will be found in every village, in every town and city and on every farm throughout the South!

In its protesting comments the *Tri-bune* says:

If there is anything in the world a self-governing people should study, think about and talk about it is the principles of the government they are called upon to sustain. It is perfectly self-evident that without such study, thought and exchange of views popular government would prove a rank failure and the country would fall into the hands of lying demagogues, and finally the people would lose their independence and become subjects instead of the rulers they were designed to be by the fathers of the republic.

Thomas Jefferson was particularly emphatic in advising a universal interest in politics, frequent elections—indeed, all things to keep the popular mind busy with the affairs of State. And the veriest tyro in the science of the American system can see that he was right. A free, a full understanding by the people of every political issue that confronts them is and can be their only safeguard against the usurpation of power by crafty and disloyal politicians.

It would be sad, indeed, for a community anywhere to be so engrossed in material undertakings that it could not find time to think about and talk about the principles of government. Equally sad would it be for a community that had to work in order to live to neglect all other interests in talking about the principles of government. But there is a wide difference between talking about the principles of government as occasion demands and as opportunity is offered and subordinating the higher interests of a community to engrossment in "talking politics" of the latter-day order. For it is seldom a case even of talking politics; it is talking politicians. It is not a discussion of principles of any kind, but an unnecessary and demoralizing excitement over the fortunes of this or that politician, seeking the leisure of office at the expense of the people or esaying to farm out the office to more or less incapable individuals. It is a case of occupation in the ambitions of the parasites upon society instead of support of the productive elements. It is playing into the hands of selfish demagogues, and is responsible for an obscuration of vital issues that the people must understand if they are to maintain their independence.

It is the demagogue who encourages the people to "talk politics," and, if a demagogue has any acquaintance with

the principles of any kind of government except the government of a mob, he never lets anybody know it.

The country is sadly in need of discussion of the principles that ought to prevail in government. But the need will not be met as long as the people are content to talk politics—to talk politicians.

RAILROAD MOTOR-CAR PROGRESS.

Interest in motor cars for certain classes of railroad service is reawakened by the building of a steam motor car by the American Locomotive Co. for the Rock Island system and by the announcement that the McKee Motor Car Co. will be organized to build gasoline motor cars. The steam motor car will use oil for fuel and will have a capacity of 250 horse-power. It is said to have made 60 miles per hour in trial runs. The motor-car company is to build motor cars which will use gasoline for power similar to those designed and built by W. R. McKee, Jr., at the Union Pacific shops at Omaha. These cars have been used on the Union Pacific and Southern Pacific lines at certain points for two or three years, and it is said demand for such cars have come from foreign countries, as well as from all parts of the United States. The Union Pacific now has either completed or building 41 of these motor cars, and they have proved valuable on branch roads and suburban lines. Cars of 200 horse-power are now being turned out and are the same as motor car No. 8, which has been running for nearly two years in daily service between Lincoln and Beatrice, Neb. It is said that Mr. E. H. Harriman will be associated with Mr. McKee in the motor-car company, which, for the present, will use the old car shops of the Union Pacific, but a special plant is to be erected either at Omaha or some other place.

This news concerning the development and use of railroad motor cars is particularly interesting because of the promise which is extended to projectors of new lines in new countries of being able to provide railroad service with a comparatively small expenditure for equipment. The cars, it is said, can be operated on lines with light passenger traffic at much less expense than trains, and it is also hoped that they will be found economically advantageous on roads which it would not pay to operate by electricity, but upon which occasional passenger service is required. Great interest has been manifested by railroad men and promoters in different States about the development and use of these motor cars, hoping, as they do, that the machines will solve some vexatious difficulties, and the MANUFACTURERS' RECORD has received at various times a number of inquiries relating to what inventors have accomplished in their efforts to perfect these vehicles. There seems to be a general impression that cars can be made to operate by either gas or electricity with greater economy to a company than can trolley electric cars under certain conditions.

Railroad motor cars as developed in the United States are of three types, the simplest being the steam motor car and the others the gasoline type, which is operated like a gasoline-driven automobile, and the gasoline-electric, so-called, which is a vehicle carrying its own power plant, consisting of a gasoline engine which drives an electric generator, that, in turn, provides the power to move the car. Each type has

its advocates, and it may be that only after long experiment and use will one of the three be demonstrated as the better. The recent building of a steam motor car to use oil instead of coal for fuel shows that progress is being made toward perfecting as far as possible this type, which has been built in one form or another for many years, starting with the old-fashioned dummy car, a lightly-built contrivance which was familiar 30 or 40 years ago and is even now used here and there, but finding as its latest expression a handsome vehicle built of steel divided into three compartments and provided with all necessary comforts. The power and speed of this late car are remarkable. On the other hand, the advocates of the gasoline car claim for it distinctive advantages, one of which is the absence of fire, a claim which is also made by the builders of the gasoline-electric car. In fact, each has its good points, yet the building of the steam motor car above noted merits particular remark because it shows that, notwithstanding progress along other lines, steam promises to be used for such vehicles and seems likely to hold its own, just as gas and even oil lamps have their places as illuminants, notwithstanding the perfection and popularity of electric lights.

It may be that the next year or two will witness a thorough trying out of the railroad motor car and a demonstration of its fitness for certain service. It may be proven beyond question that it is capable of performing work of the same character as that done by trolley electric cars in places where the erection of trolley power plants would not be economically profitable, although it is not likely that motor cars will be found as rivals of electrically-operated vehicles in cities or districts of large passenger traffic, as the trolley service operated from a power plant under such circumstances is cheap and satisfactory as well as profitable.

FORESTRY—A WARNING.

Intelligent English opinion is to the effect that there will be a dearth of wood for export in practically all countries within the next 25 years unless afforestation be extensively undertaken in the meantime. Such a dearth would mean that each country would have to depend upon itself for its supply of timber. In such circumstances the plight of the United Kingdom would be serious, for it is importing about \$135,000,000 worth of wood and timber annually and has only about 3,000,000 acres of forests within its boundaries. Commenting upon the situation, United States Consul John L. Griffiths of Liverpool says:

The additional uses to which wood is being constantly put has augmented the demand so rapidly as to cause the most serious apprehension. The great producing countries have growing internal consumption of their own, which leaves each year less wood available for export. The countries which are relied upon to make up the shortage in Great Britain are, for soft woods, the United States, Canada, Norway and Sweden; for hard woods, the United States, Japan, India and the East Indies, and for mahogany, Central America and West Africa. A large timber importer in this district stated recently that he believed Japan would in the near future become an important exporting country, and that already there had come from Japan to the English market and to many important centers on the Continent some rather large quantities of timber of excellent quality. There are no countries, the English experts say, other than the United States, Norway, Sweden, Finland and Canada, which will yield a supply of soft wood. Africa, New Zealand, Australia and other tropical countries contain only hard woods. It has been suggested that the Pacific coast will some time in the future

furnish large quantities of wood for export purposes, but that these forests are not available for the European market at the present time. When the Panama canal is opened, and Canada and the United States cannot be largely relied upon, the Pacific coast will then be a very considerable factor in the supply of wood for export purposes.

It is estimated that within the United Kingdom there are 21,000,000 acres of waste heather and rough pasture land out of cultivation upon which afforestation could be undertaken with profit. Unless that be done it is not hard to imagine England's condition when it can no longer look to other countries for its supply of timber and wood.

What England is today and what it will be when cut off from dependence upon other countries in this particular ought to suggest enlarged activity in this country in the direction of assuring permanency of our forests, no matter for what purpose, either commercial, meteorological or other. To be sure, the United States has about 30,000,000 acres of timber land, but from that 40,000,000,000 feet of lumber is being cut every year. At the present rate of cutting timber the supply, according to experts, cannot possibly be maintained for many years longer. It is the part of wisdom to make impossible any dearth in this country approaching that which threatens the United Kingdom. Prevention is far cheaper than cure. Afforestation should be undertaken upon a reasonable scale, especially upon woodlands in the longer-settled sections. Where the plan would not interfere with agricultural operations every farmer should plant a tree for every one that he cuts from his wood lot. Every railroad should adopt the policy already begun by a few of planting trees along its right of way. Drains upon the forests for firewood and cross-ties would thereby be checked. But of greater importance is the careful, scientific handling of existing supplies of timber in lumbering operations so as to reduce to a minimum the wastes from fire and the unnecessary destruction of young growth. The billion dollars a year represented in the lumber industry is an important element in American economy. The source of that annual addition to national wealth may be preserved. In its preservation, though, much more will be involved—the maintenance of the flow of great rivers, the protection of agriculture and the expansion of industrial power.

GUARANTEED BANK DEPOSITS.

When the proposition of a governmental guarantee of bank deposits came to the front in the last session of Congress the MANUFACTURERS' RECORD was prompt to point out its inherent dangers. In our issue of February 20, protesting against such a plan, we said:

Supposing that there was a Government guarantee of deposits, wildcat bankers would be placed upon the same plane with solid, conservative, safe men who need no guarantee other than their high reputation and unquestioned ability. This condition would afford the reckless fellows greater opportunity to indulge themselves in promoting schemes than they now possess, as depositors, knowing that they were safe from loss, would not be particular as to which banks they would put their money in, and the wildcaters would thrive and flourish as never before with a plenitude of cash. They would be more liberal than ever in offering inducements to the public, and the latter, feeling secure, would be correspondingly indulgent and less critical of them and their ways.

Then, the guarantee fund which it is proposed to establish would be provided by means of a tax upon all bank deposits, and who shall dare to say that the depositors would not pay the tax? Besides, it is plain to see that the effect of this would be wholly to the advantage of the dishonest banks and

correspondingly to the disadvantage of the honest ones, the former obtaining a guarantee to offset their lack of the highest business repute, while the latter would practically become the guarantors, but without receiving any advantage in return for their services. Instead of developing the sense of responsibility of bankers and making it more difficult for dishonest or incapable men to control banks as should be done, this guarantee plan, if carried into effect, would have an opposite effect. We need to enlarge individual responsibility instead of lessening it. More personal responsibility is something much to be desired not only in the management of banks, but in affairs generally. There is no doubt that a system which would cause any relaxation of vigilance on the part of depositors would be speedily followed by corresponding laxity among banking officers.

It is interesting to note that the opinion expressed by the MANUFACTURERS' RECORD nearly six months ago is reflected in the position assumed by Mr. William H. Taft. In his speech accepting the nomination for the Presidency he said as to the plan of insurance of bank deposits:

The proposition is to tax the honest and prudent banker to make up for the dishonesty and imprudence of others. No one can foresee the burden which under this system would be imposed upon the sound and conservative bankers of the country by this obligation to make good the losses caused by the reckless, speculative and dishonest men who would be enabled to secure deposits under such a system on the faith of the proposed insurance, as in its present shape the proposal would remove all safeguards against recklessness in banking, and the chief and in the end probably the only benefit would accrue to the speculator, who would be delighted to enter the banking business when it was certain that he could enjoy any profit that would accrue, while the risk would have to be assumed by his honest and hard-working fellow. In short, the proposal is wholly impracticable unless it is to be accompanied by a complete revolution in our banking system, with a supervision so close as practically to create a Government bank.

It is unfortunate that this question, so vital to the stability of the financial institutions of the country, may, in the heat of a Presidential campaign, be overshadowed by mere personal politics. It is one of the questions about which there may be honest differences of opinion as long as its full significance is not realized by all men. Discussion of it intelligently and calmly would certainly lead the minds of voters to a consideration not merely of personal interests, but also of fundamental principles in government, principles strangely confused or smothered in latter-day national politics.

There is a notable misunderstanding of the plan to insure bank deposits, and one of the most marked evidences of it is the argument advanced by several of our journalistic friends to the effect that if life insurance and fire insurance are so desirable, therefore bank deposits insurance is equally desirable. This argument loses sight entirely of the fact that provision for fire insurance or for life insurance is the result of the voluntary act of the individual, with all that that involves, whereas governmental insurance of bank deposits is in the nature of compulsion, with the individual depositor having little to do with the matter except to suffer the evil effects of wildcat banking that would be bound to follow government guarantee—evil effects in spite of the guarantee.

INDICATED IN PIG-IRON.

Effects upon the country's industries of the financial disturbance of last fall are indicated in the record of pig-iron production for the first half of 1907, the six months including the panic period, and the first six months of this year, including part of the period of gradual resumption of activity. The figures of production by tons of 2240

pounds in Southern States and in the whole country follow:

States.	1st half of 1907.	2d half of 1907.	1st half of 1908.
Maryland.....	221,145	190,688	82,785
Virginia.....	290,912	217,859	137,356
Georgia.....	26,173	29,652	5,290
Texas.....			
Alabama.....	861,771	824,993	605,617
West Virginia.....	151,643	139,423	27,901
Kentucky.....	79,613	48,933	21,357
Tennessee.....	193,371	199,735	115,249
Total.....	1,794,028	1,651,193	995,525
United States.....	13,478,044	12,303,317	6,918,004

Production decreased in the second half of 1907 under the first half of that year from 1,794,028 to 1,651,193 tons, or by 142,835 tons, equal to 7.9 per cent., in the South, and from 11,684,016 to 10,652,124 tons, or by 1,031,892 tons, equal to 8.8 per cent., in the rest of the country. The decrease in production in the first half of this year under the second half of 1907 was from 1,651,193 to 995,525 tons, or by 655,668 tons, equal to 39.7 per cent., in the South, and from 10,652,124 to 5,922,479 tons, or by 4,729,645 tons, equal to 44.4 per cent., in the rest of the country. Comparison of the first half of 1907 and the first half of 1908 shows a falling off of 5,761,537 tons, equal to 49.3 per cent., in the rest of the country, and 798,503 tons, equal to 44.5 per cent., in the South.

SETTLING NIGHT-RIDING.

If reports be true that night-riders in Kentucky have warned railroad companies in that State that their trains will be derailed and their property destroyed in the event of their permitting State troops to camp on their rights of way, the night-riders are riding straight to the final fall desired for them by all lovers of liberty, law and order. It is easily conceivable that the derailment of one railroad train in Kentucky would develop at once a situation not unlike the situation at Pullman, Ill., in the 90s, compelling the Federal Government, in obedience to the Constitution, to take a hand in the solution of a difficulty beyond the power of the State. Every true American deprecates such a situation, but every true American upholds the Federal Government in dealing constitutionally with the situation. The weakening of State rights involved in such a solution of the night-riding curse and anarchy in Kentucky would not be made by the Federal power. For it the night-riders would be wholly responsible.

APPALACHIAN FOREST RESERVE.

For the purpose of furthering its aggressive campaign for forest reserves in the White Mountains of New England and the Southern Appalachians, the Appalachian National Forest Association has determined to establish its headquarters at 514 Metropolitan Bank Building, Washington, D. C., with Mr. John H. Finney, secretary and treasurer, in charge. The association has recently elected as its president Mr. D. A. Tompkins of Charlotte, N. C., one of the representative and progressive men of the South, and in accepting the office Mr. Tompkins has sounded the following strong rallying cry:

"In accepting, as I do, the presidency of your association tendered me today by your votes, I desire to briefly express my appreciation of your action and my realization of the responsibilities this position imposes upon me.

"To my mind the preservation of our remaining forests, and of our Southern forests particularly, presents the largest economic question which we of the South today face.

"This is not only true as regards our future timber supply, but is of very vital concern to our climate, our waterways and water-powers, our domestic water supply

and the health of our people, our agriculture by the prevention of soil erosion and floods, etc.

"The work already done by the Appalachian National Forest Association has merited my warmest commendation, and I welcome some share in it as a patriotic duty to the South and to the nation which cannot be evaded.

"We must have the Appalachian and White Mountain forests. We will have them.

"But they must be but the beginning of our work, for important as the Appalachians are, they are overshadowed in importance by the work involved in the perpetuation of the forest areas in each State, which must have action by the several States if they are to be saved.

"Let me outline this State duty.

"Each State should appoint a State Conservation Commission to co-operate fully with the National Conservation Commission just appointed by President Roosevelt.

"Each State should establish a 'State forest'—as large a one as possible, or small areas scattered throughout the State, under control of a State forester, as an object-lesson in practical forestry. Each State should revise its tax laws on forest lands, so that its citizens can afford to hold forest areas, cutting therefrom only mature trees. Each State should pass stringent fire laws and adequately enforce them, that the woeful waste from forest fires may be stopped.

"Each State should aim to educate the citizen owning forest lands to a sense of his duty to himself and posterity and to the State.

"Our association is the rallying point for this great work; our object is well worth all the time and energy we can put into it, and we ought to have behind us and actively aiding us every patriotic man and woman in the South; every Board of Trade or Chamber of Commerce; every Woman's Club; every Civic League or similar public organization; all the splendid manufacturing interests there.

"We ought to have and must have a branch of our association in every Southern city. We ought to have forestry mass-meetings in all the important Southern cities, so the real facts and the importance of them can be put before the people.

"This is a large conception, though thoroughly justified by the existing conditions. It means unremitting effort in the State and in the national Legislatures, but the plans of the association comprehensively and adequately cover the work, and will, I am sure, merit and receive the active support of the entire South.

"We are pledged to the work until the forests are saved."

FARMING AT WORCESTER.

The July number of the *Worcester Magazine*, published by the Worcester (Mass.) Board of Trade, is an agricultural number, and in explanation of such a publication under the auspices of the commercial body of the city ranking third in size in New England, it says:

"Worcester contains 34 square miles. According to the last available census figures, taken in 1895, the farming land within the city limits occupied more than 18 square miles, 12 of which were under cultivation, the total value of farming property being close to \$5,000,000. The extension of building has somewhat diminished this area and valuation, but a careful study of Worcester's latest map by an expert led to the confident assertion that more than 10 square miles of tillage land are today under cultivation, the dividing line between the small farm and the large market garden being, of course, hard to draw. This agricultural area and those who occupy it belong to Worcester as truly

as her stores and factories. The honored Secretary for the Commonwealth of Massachusetts, whose contribution appears elsewhere in this number, resides in this city and divides his time between his office on Beacon Hill and a farm less than a mile and a half from our City Hall, whose operations he personally manages. The largest Grange in the State is in the city of Worcester, numbering on the first day of this month 504 members. Considered by themselves alone, these agricultural interests hold an important place among us.

"But we trust the contents of this number will make it evident that in their far-reaching relations to all citizens these agricultural interests deserve careful thought. The milk question concerns every home in this city, and the poorer the home, the more important it becomes. One can scarcely read such figures as come to us from across the sea without asking himself whether it is impossible for such conditions to be created some time in Worcester. Can anyone doubt the value to this city, economically, if in no other light, which would accrue from a closer approximation to Copenhagen's abundant use of good and cheap milk? We have given much space to the account of the clean milk station and the experiment in Rochester, on which it was modeled. It is impossible to escape the demonstrated facts as to the saving of hundreds of lives by such simple and sensible methods. Are not lives of little ones in Worcester quite as worth saving as similar lives in Copenhagen or Rochester? Is there any conceivable standard, ethical, humanitarian or commercial, by which such work will not manifestly pay?

"The same may be said of the gardens on lands hitherto barren, within the very heart of the densest portion of our population. Just now it approves itself especially in connection with help to the unemployed in a year of hard stress. But in the best of times such garden spots should be made possible. They are equally good investments with parks and playgrounds, and should be rated on the same basis. Furthermore, they point the way to the solution of the tenement problem, which rapid transit will some day give us, when every family shall have its separate home and bit of land."

There is a practical hint in this bit of enterprise by the Worcester Board of Trade which boards of trade in Southern cities might do well to consider. It seems to be a case of not keeping all of one's eggs in one basket, of having one's mind upon more than one number, of not confining one's attention to questions of trade, but of being alert upon every point that may be utilized for the full benefit of the community.

"THE SUMMONS OF THE SOUTH."

[New York Times.]

"You all had better come home." These are the words of advice to Southern men living in the North, addressed to them by Mr. Richard H. Edmonds, the accomplished and indefatigable editor of the *MANUFACTURERS' RECORD* of Baltimore. The appeal was made in an address last spring before the Southern Society of Boston, which is now printed in pamphlet form, with another of like import, and is being widely distributed. Unquestionably it is a very interesting document.

The one dominant reason why Mr. Edmonds thinks that the Southerners in the North would do well to "come home" is that untold wealth awaits them if they seek it with anything like the energy and intelligence they show in their present occupations. The figures he has compiled as to the extent and variety of the sources from which wealth may be attained in the South are little less than startling. He points, for instance, to the reports of the

United States Geological Survey giving "a total of known (iron) ore supplies" in the South at 10,000,000,000 tons, or about five times as much as the known ore supplies of the Lake Superior region, and nearly as much as the supplies of that region and of the whole of Europe combined. And he predicts that within 30 years, a single generation, the present known supplies of ore in the Lake Superior region will be exhausted and the South will have practically a monopoly of the demand, unless other sources are discovered.

At the same time the South is happy in the possession of 62,000 square miles of coal deposits, which is nearly 50 per cent. more than the entire coal area of Europe, and its coal beds are already being worked with rapid progress, and, on account of their proximity to the ore, with unusual profit. It has also a remarkable development of petroleum entirely unexpected in situation and extent. And finally, it has its superb provision of potential water-power in the streams that flow down the eastern slope of the Appalachian ranges, amounting to 2,740,000 horse-power available for the whole year. In actual products Mr. Edmonds points to the \$700,000,000 a year of cotton for the last five years, so much of which goes to the markets of Europe that "if it were possible to gather annually every ounce of gold mined on earth and pour it into the South the sum would still fall short by \$100,000,000 of paying Europe's indebtedness to this section for cotton." Still more striking is Mr. Edmonds' statement of the resources of the South in agricultural products other than cotton. Besides the 800,000,000 bushels of grain which it raises annually, the culture of fruits and vegetable is advancing at a rate that makes the profits cited seem fabulous—citrus fruits in Florida yielding \$500, onions in Texas producing \$1000 an acre, and rice in Louisiana making land worth \$100 an acre which 20 years ago could have been bought for 25 cents.

With such possibilities and actual achievements, Mr. Edmonds is certainly justified in saying that the South could easily support a population as large as that of the entire country at present. His appeal to the absentees is eloquent:

"The South calls to you; it calls with deep earnestness, come home. It promises you a wider field for capital, for muscle and for brain than any other equal area on earth, and it calls you not only by reason of what it offers in material possibilities, but because in shaping its destiny it needs the hearty co-operation of those who, broadened by travel and study and the intermingling with the people of other sections, are the better prepared to help formulate and carry to fruition the policies which make for ethical and religious, as well as for material advancement.

"Come home."

There is a suggestion here of a wider problem than is embodied in the editor's marvelous figures. Primarily the problem is for the people of the South themselves to put in the way of solution. Surely they have the utmost inducement to do so.

"First Families."

Under authority of Congress the Director of the Census published in 1907 the names of heads of families, with related data, secured under the schedules of the first census of the United States in 1790 in New Hampshire, Vermont and Maryland. Under authority of the last Congress the Director of the Census will publish during the present year similar names of 1790 in Maine, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, North Carolina and South Carolina and Virginia. The pamphlets, con-

taining the names of each State and consisting of from 100 to 300 pages, will be sold for \$1 each.

LOUISIANA'S CAPITAL CITY.

Baton Rouge Reaching Out for More Industries.

Baton Rouge, La., August 1.

Baton Rouge, situated 130 miles above New Orleans by water, 76 miles by rail and about 72 miles on an air line, is the third city in commercial importance in Louisiana. With a population of 26,000 and with all the natural advantages necessary for a thriving city, it bids fair to reach the 50,000 mark in the next five years.

Baton Rouge will have before January 1, 1909, eight railroads in actual operation, and will then be equipped with shipping facilities second to those of no city of equal size in the South. These various railroads run through immense sections of virgin timber of all kinds, including cypress, pine, oak, ash, hickory, gum, and are all accessible and a short haul from Baton Rouge. The Baton Rouge Board of Trade is offering a free site to any factory that will come and establish itself here, and no town in the South presents better opportunities for the profitable location and operation of the many kinds of hardwood factories.

In this connection the Board of Trade is at this time very much interested in the building of a belt road around the city so as to facilitate the transportation of the various factories and industries that are coming this way. The city is almost completely surrounded now by railroads, and it would be an easy matter to connect the various lines, but the Board of Trade is desirous of seeing the city own its own belt road, and it believes this to be the most practical and beneficial for new industries. Then factories might locate anywhere on the belt and have the best of shipping facilities.

Among the many industries that can be located profitably at Baton Rouge may be mentioned the following: Sash, door and blind factory, buggy and wagon factory, furniture factory, broom factory and hosiery and cotton mills. There is no better point in the South for a big furniture factory or a cotton mill. The raw material and transportation facilities are unsurpassed.

The health of Baton Rouge is attested by facts and figures. Death-rate in 1907 was 14 per cent. per 1000. This compares favorably with the health statistics of other cities. Baton Rouge has a splendid system of public schools conducted by trained teachers. The head of the educational system of the State, the Louisiana State University, is located here. Its enrollment for the year 1907-08 was 635.

Baton Rouge has five banks, all of which are in a flourishing condition. The aggregate capital and surplus of these five banks is \$878,694; aggregate deposits, \$1,722,736; aggregate resources, \$2,601,430.

The city has seven miles of paved streets and 15 miles of sewerage. It is one of the capital cities that grow. It has doubled in city assessment and population in the past eight years. It has an up-to-date, modern street-car system. It wants 25,000 more people.

Electric Power for Raleigh.

[Special Cor. Manufacturers' Record.]
Raleigh, N. C., August 3.

The largest company chartered in North Carolina this year, the Carolina Power Co., establishes its office at Raleigh. Its capital stock totals \$3,750,000, and it takes over the Buckhorn Falls power plant, developing electrically 4000 horse-power, and which cost nearly \$700,000; the Ra-

leigh Street Railway and Lighting plant, the Durham gas plant and some other minor plants, and it has arrangements whereby 4000 more horse-power can be developed by water at points a few miles above Buckhorn Falls, on the Cape Fear river. This power from the latter falls is to be brought here at once, the distance being 28 miles, and the Raleigh factories, including all the cotton mills, have contracted for a very considerable portion of it. H. H. Carr, long connected with the electric railway at Newport News, Va., and who has been manager of the Raleigh Electric Co., becomes general manager of the Carolina Power Co. The Electric Bond & Share Co. of New York city is the largest stockholder. Very great developments are expected from this company. The Raleigh Chamber of Commerce and Industry is prepared to offer free building sites for industrial plants conveniently situated along the Southern Railway immediately south of the city, and as soon as the power comes in from Buckhorn Falls this city will be able to offer cheap and abundant electric power. Work is in progress on the electric plant at Blewitt's Falls, in Richmond county, where 36,000 horse-power is to be developed and will soon be available, and this, if necessary, can be coupled up with the Buckhorn power. Yet other powers are available on the Cape Fear river.

IRON MARKET IMPROVES.

Several Large Buyers in the Birmingham District.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., August 3.

The past week in the iron market was a decided improvement over the preceding one. The inquiry was very much better, and there were several large buyers in the market, and, with possibly one or two exceptions, they failed to secure all their requirements. Some of the interests were sold up on the grades wanted for satisfactory deliveries, and some had advanced price to prohibitory values. There were lots of small orders at times flooding the market, and to the most of them was an accompanying request to ship purchases as promptly as possible. The latter part of the week developed a fine business of this character. It was common gossip that one of the larger buyers was in the market for 25,000 tons, while there were several for 5000 tons and less. One of the leading interests said to your correspondent before the close of the week that its sales for the week would total full 35,000 tons, and it would have been larger if it had fully fed the demand. The business done was on the basis of \$11.75 to \$12 for No. 2 foundry. There were a few sales of small lots at \$12.25, but they were above the market price that prevailed during the week. There was one sale of 1000 tons divided into three lots, 250 tons for August, 500 tons for September and 250 for October, on the basis of \$12.50 for No. 2 foundry, but it had to carry 2 to 2½ per cent. of silicon. The Clifton brand met the requirements and secured the order. There was another sale under similar conditions of higher silicon that brought \$13.50, and still another sale of still higher silicon that was made at \$14.50. The deliveries on these sales were for the third quarter. The sales the last half of the week for this one interest were between 8000 and 9000 tons.

There were other sales during the week on the basis of \$12 for No. 2 foundry. There were a few sales of Nos. 3 and 4 foundry on the basis of \$12 for delivery during the third quarter. Several sales for the fourth quarter are suspected, but it is impossible to assert the fact with any certainty. Two of the leading interests have maintained prices that bar all trade.

This has diminished the full source of supply and made it more difficult to fill the requirements of the buyers. Stocks are diminishing, and fully one-half the stock in furnace yards in the State of Alabama is held by one interest. As near as it can be estimated, the total stock in the furnace yards will reach not over 80,000 tons. Just consider that one-half of it is controlled by one interest, and one has the key to why it is difficult to supply requirements. Not a furnace has been withdrawn from ironmaking since the commencement of the strike. But there has been an addition of one furnace to the capacity of the district. It has been by a close shave that some have been enabled to keep going, but they have managed "by hook and by crook" to do so. Large purchases of coke have been made from other districts, and reports from the coal operators indicate that the percentage of the output of coal has been increased. The furnaces have been on the hump, and they have never turned out such a satisfactory output as they have in the recent past. This is no fancy sketch, for my authority is the furnace reports which have been freely shown to me.

That reminds me that the steel plant has been making of late some record-making runs, surpassing anything they have heretofore attained. During the month just closed the output of ingots was 42,022 tons. The next largest production of ingots in its history was in March of this year, when they amounted to 39,298 tons, an increase of more than 2700 tons.

In the blooming mill the production for the month of July was 37,124 tons. The best previous record was in the month of March, when it was 35,147 tons. This shows an increase of nearly 2000 tons. There is an emphatic denial of the gossip of the crippling of the rail mill by an insufficient supply of coal. The record shows that the output of steel rails for the last week exceeded any previous record by nearly 1000 tons. The output of the Alice furnace for the month was fully 1000 tons greater than any other output in its history for the same time. It amounted to nearly 8000 tons. Let this be an answer to the wild assertions made to disseminate vicious news.

The McCary-Jemison Machinery Co. was organized the past week and its incorporation papers filed. Its object is to deal in all kinds of machinery and electrical appliances. It is capitalized at \$12,500. John S. Jemison is president and W. J. Cameron, Jr., is secretary and treasurer. Daniel S. Martin is vice-president.

The Wood-Dickerson Lumber Co. has changed the name to the Wood-Norris Lumber Co., with W. D. Wood as president.

The Home Furniture Co. was incorporated the past week with a capitalization of \$15,000. A. M. Williamson is president and treasurer, C. C. Stone is secretary and M. L. Williamson is vice-president. It will conduct a wholesale and retail furniture business in this city. There are some important enterprises cut out for consummation this year, and work will begin on one or more of them within the next 30 days.

The market for scrap iron has been without interest. The demand was for moderate amounts, and while some of the grades showed some improvement over the preceding week, it was nothing more than a fluctuation in values. Holders have faith in some advance, as they expect to derive benefit from the advance expected in the pig-iron market. There were a few changes made in some of the grades, but not enough to alter the quotations as given last week. The scrap-iron yards show

very fair stocks on hand, and quotations are as follows:

Old iron axles, \$14.
Old iron rails, \$13.
Old steel axles, \$13.50.
Old car wheels, \$12.
No. 1 railroad wrought, \$12.
No. 2 railroad wrought, \$10.
No. 1 country wrought, \$10.
No. 2 country wrought, \$9.
Malleable, \$10.
No. 1 machinery castings, \$10 to \$10.50.
Wrought-iron pipe and flues, \$10.
No. 1 steel, \$10.
Stove plate, \$8.50.
Cast borings, \$5.50. J. M. K.

Inland Waterway.

Mr. Leon Locke of Lake Charles, La., secretary of the Interstate Inland Waterway Association, informs the MANUFACTURERS' RECORD that in Louisiana all the rights of way for the section of the intercoastal canal provided for by the appropriation have been obtained. In Texas dredging is now under way, but delays were encountered in Louisiana by reason of the difficulty in obtaining rights of way which were to be granted without cost to the Government. As the result of persistent and intelligent work done by the Interstate Inland Waterway Association, that difficulty was removed by the passage at the last session of the State Legislature of the Gueydan bill, authorizing school boards in the parishes to donate land for rights of way for canals. The amount to be expended in the excavation of the section of the canal from Teche to the Mermentau is about \$350,000. The officers of the Interstate Inland Waterway Association, which is working for intercoastal canal connecting the Rio Grande and the Mississippi and rivers lying between, are Messrs. C. S. E. Holland, president, Victoria, Texas; Henri L. Gueydan, first vice-president, Gueydan, La.; Robt. A. Cowart, second vice-president, Dallas, Texas; Chas. R. Kitchell, secretary, Galveston, Texas; Leon Locke, secretary for Louisiana, Lake Charles, La.; Henri L. Gueydan, Gueydan, La.; S. Locke Breaux, New Orleans, La.; E. A. Pharr, Morgan City, La.; Walter J. Burke, New Iberia, La.; E. P. Munson, Napoleonville, La.; C. C. Dusen, Crowley, La., and Leon Locke, Lake Charles, La., are the members of the executive committee for Louisiana, and C. S. E. Holland, Victoria, Texas; Robt. A. Cowart, Dallas, Texas; Royall Givens, Corpus Christi, Texas; C. A. Summers, Cuero, Texas; Jas. B. Baker, Waco, Texas; Hugh Jackson, Beaumont, Texas; C. J. Palmer, Houston, Texas, and Walter Gresham, Galveston, Texas, are the members of the executive committee for Texas.

Wants Plans for City School.

The Board of Public School Trustees, El Paso, Texas, invites plans and specifications until September 1 for construction of a municipal school building to cost \$25,000, exclusive of heating equipment. For particulars address the trustees.

Courthouse Plans Wanted.

The Supervisors of Roanoke County, Chas. D. Denit, clerk, Salem, Va., will receive plans and specifications until August 17 for construction of proposed courthouse. It is understood that \$50,000 is available for expenditure.

The Bank of Millerton, Millerton, Okla., is circulating a little pamphlet calling attention to the opportunities of the community, which in the winter of 1906 consisted of a sawmill plant, a cotton gin, a corn mill and a wood-distilling plant, but which now has 50 buildings, including a number of industrial establishments.

RAILWAYS: A FOUNDATION OF WEALTH.

By G. D. BAKER.

[Written for the Manufacturers' Record.]

This country has reached the stage in its development in which the growth of cities is most conspicuous and the welfare of the dwellers in the cities is of the most concern. Means of transportation is a fundamental necessity to the present population; it is the absolute prerequisite to further growth of the area covered by the city and the welfare of its people. Distances from the place of business are measured not in miles, but in minutes. The time necessary to consume in transportation is the controlling element in considering the location of the home.

The transportation question is, therefore, one of the most important ones which confront us, and fortunately we have had an experience of years in the development of transportation facilities, afforded by the steam railroads of our country, which give us direct and positive guidance as to what will result from more extended transportation facilities applied to our cities.

In 1850 the whole railroad mileage of the United States was about 9100 miles. In the valley between the mountains and the Mississippi river an already large population, dependent upon national roads and canals, was struggling to secure better transportation facilities for the increasing products of their farms and their growing manufactures—and railroads were being projected everywhere.

In the State of Ohio rights of way were offered to the railroad companies, and cities and towns vied with each other in their efforts to secure the construction of railroads to or through them. The competition was fierce. Bonds were voted, private subscriptions raised, lands donated and terminal facilities granted in order to secure the coveted railroad or to prevent some rival town from securing it.

The State was enormously benefited by their construction and many times repaid for the gifts and donations made to secure their construction, as shown by the following facts:

State of Ohio.			
Area—40,760 square miles.			
Year.	Road.	Population.	Value of Manufactures.
1850...	575	1,980,329	\$62,892,278
1860...	2946	2,339,511	121,691,148
1870...	3538	2,665,260	269,713,610
1880...	5792	3,198,062	348,298,290
1890...	7980	3,672,316	641,688,061
1900...	8885	4,157,545	822,438,113

From this it can be seen that by reason of the system of railroads, whose building was induced by gifts of right of way and substantial subsidies and donations besides, the wealth of the State within this period grew enormously. In other words, while the increase of population in the State from 1850 to 1900 amounted to 110 per cent., the increase in the product of that population was 900 per cent., while the increase in wealth was 1160 per cent.; or, in other words, while in 1850 the average wealth of each individual in Ohio was only \$250, it had grown by 1900 to the sum of \$1400 per capita.

The same process was going on in the adjacent States of Indiana, Michigan and Illinois, and the resultant increase in wealth, manufacture and income. At the same time that this process of supplying transportation facilities to the already populous central States was resulting in their enrichment, the Government was undertaking the problem of opening up its great national domain lying west of the Mississippi, which at that time—in 1850—held a total population of only 1,481,000, or about that of the single State of Kansas today. There were magnificent stretches of rich land, great areas of fine forest and rich treasures of mineral wealth which were valueless because of their in-

accessibility. It was impossible to reach them on account of the lack of transportation facilities, and impossible to take their products to market for lack of cheap transportation rates. Before the building of railroads it took six weeks for a wagon train to travel from the Missouri river to Colorado, and the charge for hauling freight ranged from 15 to 25 cents per pound, according to season. The fare was \$300 per passenger, with extra charges for meals.

Under such conditions it was impossible to attract labor or induce emigration into this great public domain, because the returns of labor were dependent upon transportation facilities and rates, and in such inaccessible places these returns were meagre and poor compared to those obtained even under the most trying conditions where transportation facilities were present.

It was difficult and expensive for the Government to police this vast territory, and private capital engaged in building railroads in the States where there was already population and traffic was not attracted to the public domain, rich and desirable though it was in natural resources and advantages, because it held no population to create business and traffic, and railroad construction therein would consequently not only be unprofitable, but would be attended by actual and severe loss. Then, too, this public domain being the property of the Government, private capital and the people generally had no direct or personal interest in it. The result was that the Government, recognizing the fact that this great public domain must pay for its own improvement and opening up, sought to interest private capital by giving to it a large proportion of this public domain in consideration of the construction by private capital of the railroads necessary to open up this great territory.

In order to do this, the Government granted to railroad companies about 200,000,000 acres of land, or almost one-sixth of the entire public domain lying west of the Mississippi river. This grant, however, of 200,000,000 acres was really a much larger proportion of the desirable part of the public domain, being really one-fourth of all that it was possible to use after eliminating desert spots and mountain tops. This enormous grant to secure the construction of railroads was not, however, sufficient to secure the speedy opening up of the public domain, so in addition to these grants of land the Government gave cash subsidies amounting to approximately \$100,000,000. The result has been that in consideration of the grant of \$100,000,000 in cash and 200,000,000 acres of land, the Government has secured the construction in this territory west of the Mississippi river of 98,000 miles of railroad, or nearly one-half of the railroad mileage of the United States, while the population of this same region has increased from 1,481,000 in 1850 to 22,500,000 in 1904.

The subsidies granted by the Government, however, were not the only grants made to secure the construction of these railroads. The State of Missouri alone granted \$25,000,000 in subsidies for the building of railroads within its borders, and the other grants by States, counties, cities, towns and individuals to secure the construction of railroads far exceeded even those granted by the Federal Government itself.

With the increase of transportation facilities the commerce, manufactures and

wealth of the whole country have grown steadily, as the following table shows:

Year.	Population.	Miles of Road.
1850.....	23,191,876	9,021
1860.....	31,443,321	30,928
1870.....	38,558,371	52,922
1880.....	50,155,783	93,262
1890.....	62,622,250	166,703
1900.....	76,943,387	193,345
1902.....	81,000,000	203,131

From this it will be seen that in a little over 50 years since the construction of railroad mileage under the inducement of public and private grants and subsidies really began, during which period our railroad mileage has increased by reason of these subsidies or grants more than 2200 per cent., our manufactures increased 1400 per cent., our internal commerce grew 950 per cent. and our wealth increased more than 1400 per cent., and this, too, while the population increased only about 240 per cent.

If the Government had received no return whatever from its grants made to secure the construction of these railroads, it would have been amply repaid by the enormous growth in commerce, manufactures and wealth just shown; but it has received directly much more than it ever paid, as shown in the prosperity that has come to the people by the construction of these railroads. The public lands which it held and still holds have increased in value enormously; the \$100,000,000 of cash bonus given to the railroads has every dollar of it been repaid, and the railroads whose construction was induced by these grants or subsidies are now contributing to the support of the Government sums that approximate \$50,000,000 a year, while the indirect returns resultant from the building up of this country and the increased taxes and revenue from the increased population are almost too great to be estimated.

Compare the statistics of the State of Alabama and Arkansas with those of Ohio, and a reasonably true conception of the future of their largest cities—Birmingham and Little Rock—may be had by comparing them with the several large cities of Ohio:

State of Alabama.			
Area—51,540 square miles.			
Year.	Road.	Population.	Value of Manufactures.
1850...	183	771,623	\$4,528,876
1860...	743	964,201	10,588,566
1870...	1157	996,992	13,040,644
1880...	1843	1,262,505	13,565,504
1890...	3422	1,513,617	51,226,065
1900...	4197	1,828,097	80,741,449

State of Arkansas.			
Area—53,045 square miles.			
Year.	Road.	Population.	Value of Manufactures.
1850...	35	269,897	\$37,908
1860...	38	425,450	2,880,578
1870...	256	484,471	4,629,234
1880...	459	802,525	6,756,159
1890...	2303	1,128,179	22,659,179
1900...	3109	1,311,564	45,197,731

The development of railroads in Alabama is comparatively recent.

The resources of that State are immeasurably greater than those of Ohio, and much more varied. Alabama can produce nearly every agricultural product that is produced in Ohio, and many that Ohio cannot produce.

Alabama's coal area is greater than that of Ohio, and its great deposits of iron ore and its product of cotton far exceed the products of Ohio which are not natural to Alabama.

Alabama's seacoast is available for a greater development of shipping than is the lake which has contributed so largely to Ohio's wealth.

While Ohio is one of the great manufacturing districts of the country, it does not enjoy the natural resources which abound in Alabama.

Alabama has a climate so equable that it does not have the extreme cold weather which in Ohio interferes with production for a considerable portion of the year, and so adds to the cost of manufacture and to the living of the wage-earners as to give

an enormous advantage to the people of Alabama. This one advantage of climate

Value of Manufactures.	Internal Commerce.	Wealth.
\$1,019,106,616	\$2,000,000,000	\$7,135,780,000
1,885,881,676	3,500,000,000	16,150,616,068
4,232,325,442	6,250,000,000	30,068,518,577
5,369,579,131	7,750,000,000	43,642,000,000
9,373,437,283	12,000,000,000	65,037,091,197
13,014,287,498	18,000,000,000	94,300,000,000
14,288,935,072	21,000,000,000	100,000,000,000

alone, when properly appreciated, will give an impetus to the growth of population in Alabama, where the average temperature in the center of the State during the hottest months is 82 degrees and of the coldest months is 50 degrees.

Another example of a district which is virtually in its undeveloped condition is the State of Arkansas. The total land surface of Arkansas is approximately 53,475 square miles, the average number of persons to the square mile being 24.73. Its total area is 33,824,000 acres. It is larger than either New York or Pennsylvania, and is four-fifths as large as all of the New England States combined. Within its borders are almost every variety of land and climate. The annual mean temperature at Little Rock—the center of the State—is about one degree lower than that of Los Angeles, Cal. The diversity of climate is such that in the northwest portion of the State winter wheat and apples grow as though indigenous to the land. In the southern portion of the State cotton and sugar-cane grow in all their luxuriance; between these extremes there flourish almost every kind of fruit and grain grown in the United States.

In mineral wealth Arkansas is more richly endowed than many another State in the Union. More than 7,000,000 of acres contain valuable minerals, and although but little of this great wealth has been developed, the following deposits are known to exist in almost unlimited quantities: Iron ore, zinc, lead, copper, marble, granite and a number of varieties of other stone. Slate, aluminum and the following are also found: Topaz, amethyst, agate and diamonds. Millions of acres contain valuable architectural stone and clays which are almost untouched.

In six different counties, underlying nearly 5,000,000 acres, Arkansas has a total area of workable coal fields of 2000 square miles, containing a quantity of smokeless coal generally considered equal and by some superior to Pennsylvania hard coal. In 1906 only 65 mines were in operation, and the State produced 1,875,509 tons of coal.

Besides sugar-cane and an excellent quality of cotton, its product of other agricultural staples is varied, as shown in the following table:

Agricultural Products of Arkansas for the Year 1906.		
	Average.	Total price received.
Corn.....	2,237,397	\$24,817,307
Wheat.....	177,338	1,436,438
Oats.....	184,571	1,538,157
Rye.....	1,971	19,631
Rice.....	4,240	111,724
Irish potatoes.....	20,837	1,116,863
Hay.....	70,932	1,123,561
Tobacco.....	944	78,730
Total.....	2,698,230	\$30,230,311

Vegetables of every variety grow in abundance and through such long seasons that the supply is never exhausted.

The lands which are especially adapted to fruit-growing comprise nearly 20,000,000 acres, and not one-twentieth of this area is now used for that purpose.

The agricultural lands cover an area of more than 25,000,000 acres, only about one-tenth of which is used in the production of the principal staples, as shown in the preceding table.

The timber land of Arkansas originally covered almost the entire area of the State, and there is enough merchantable timber now standing which, if manufactured into lumber and sold at market prices, would produce an amount equal to the assessed

valuation of all the farming land in the State of Kansas.

Only a few of the medicinal springs are improved, and nearly 100 people now go annually to partake of these healthful waters.

More than 3000 miles of navigable rivers, almost entirely unimproved, are destined to be converted into ship canals and commercial carriers and their immeasurable power utilized. The State contains 33 rivers.

Arkansas is scantily populated. Its largest city, Little Rock, is at the geographical center of the State, and is its political, social, financial and railroad center. All the undeveloped wealth of this vast domain is tributary to that city. The Arkansas river is navigable to that point, and Little Rock will thus lead all other cities in the State in its accessibility. Its pre-eminence already attained as a distributing center will undoubtedly be retained. It is within 90 miles of a great deposit of coal, which will give it resources for manufacturing equal to those of any locality in the country.

Look at the map and compare the location of Birmingham in Alabama or Little Rock in Arkansas with that of Columbus in Ohio or Indianapolis in Indiana. Is it not perfectly apparent that Little Rock will grow to the present size of these cities?

Ohio, in the natural order of the development of its resources, has produced a number of great cities. The same natural development is inevitable in Alabama and Arkansas, and the extraordinary conditions existing in Birmingham and Little Rock which have made them the largest cities in their States will inevitably cause them to continue in their growth.

We seldom, if ever, cast a look forward to see what is a few years ahead of us in the development of the country, and we do not realize that notwithstanding the enormous development that has taken place within the past 20 or 30 years we have hardly more than scratched the surface. In order to get a very faint view of the future, and to help us realize something of that industrial and commercial greatness into which we are entering without knowing it, and which will be of such proportions that by comparison the conditions existing today will seem crude, we have but to observe what we think of as an extraordinary development of a single State or district and compare it with the present development in another section.

The development in Alabama within the past 10 years is looked upon by a few who have had occasion to study the situation as marvelous, and the figures which represent the value of property which has been created, or the value of the output of minerals, which, starting with practically nothing 25 years ago, reached in the one item of coal into millions of dollars in a single year, are astounding. When, however, this development is compared with that of an older section it is very trivial. This development has been retarded by years of inactivity brought upon that particular section largely as the result of the war, whereas the progress in industrial growth in other sections has been uninterrupted. With the progress made in the State of Alabama compare that of the city of Boston. The amount of capital invested in manufacturing interests in that city is greater than the entire amount invested in the State of Alabama. Moreover, while Alabama has comparatively little investment in manufacturing outside of its own borders, Boston has hundreds of millions invested in railroads and industrial enterprises in the West and South. The deposits of the savings banks of Massachusetts are about \$700,000,000, or only

12 or 15 per cent. less than the total national banking capital of the United States. Boston's manufactured products in 1900 exceeded in value those of Georgia and Alabama, two of the richest States of the South, whose natural resources for manufacturing are infinitely beyond the advantages of the whole of New England.

In proportion to its area, Massachusetts has three times the railroad mileage of the South, and that State, almost without natural resources, so small that it could be carved out of any of half a dozen Southern States and scarcely be missed, has 60 per cent. as much manufactured output as the entire South.

The true value of real property in Greater New York is about one-tenth of that of all similar property in the United States. The true value of real property in Greater New York is 10 per cent. more than that of the real property in all of the New England States put together, and it is equal to the combined value of the corresponding property in the cities of Chicago, Philadelphia, St. Louis, Boston and Baltimore. In the area between 14th street and the Battery, which is about equal to that part of Chicago which was swept by fire in 1871, there is property worth over \$400,000,000. In the wholesale dry goods district, between Reade and 10th streets, the property subject to the risk of fire loss is estimated to exceed by many millions the amount of the total assets of all the fire and marine insurance companies in the United States. The assessed valuation of the Wall Street district is over \$200,000,000.

If this may be said of single small districts, it is absolutely beyond our conception to appreciate the enormous wealth of the future of the entire country. The natural forces which have produced the present status in Massachusetts, New York and Ohio are at work on all other sections of the country. The same industry and intelligence is now applied to all sections alike. The application of these forces in sections where natural conditions are immeasurably more favorable will produce results which our present ideas are too limited to comprehend. It is profitable for us to endeavor to get as true a view of this future as possible, because everyone who is contributing to that development can thus do so more intelligently.

Varieties of Pig-Iron.

The production of Bessemer and low-phosphorus pig-iron in the first half of 1908 was 3,388,491 tons, against 6,045,742 tons in the last half of 1907 and 7,185,878 tons in the first half, according to the *Bulletin* of the American Iron and Steel Association. The production in the first half of 1908 includes 61,825 tons of low-phosphorus pig-iron, against 100,068 tons in the last half of 1907.

The production of basic pig-iron in the first half of 1908 was 1,481,612 tons, against 2,704,083 tons in the last half of 1907 and 2,671,136 tons in the first half. Basic pig-iron made with charcoal is not included.

The production of charcoal pig-iron in the first half of 1908 was 129,720 tons, against 231,601 tons in the last half of 1907 and 205,796 tons in the first half. The figures for the first half of 1908 and for the second half of 1907 include a few tons made with charcoal and electricity.

The production of spiegeleisen and ferro-manganese in the first half of 1908 was 85,493 tons, against 166,673 tons in the last half of 1907 and 172,675 tons in the first half. The production of spiegeleisen alone in the first half of 1908 was 67,021 tons. Of ferro-manganese alone the production in the first half of 1908 was 18,472 tons.

The production of bituminous coal and

coke pig-iron in the first six months of 1908 amounted to 6,547,439 tons, as compared with 11,458,396 tons in the last half of 1907; the production of anthracite and coke mixed was 239,151 tons, as compared with 595,981 tons in the last half of 1907; of anthracite alone the production was 1694 tons, as compared with 17,339 tons in the last half of 1907; charcoal is given above.

Baltimore Sewerage.

Chief Engineer Hendrick of the Sewerage Commission is preparing plans and specifications for the sewer construction work to be let in the early fall, amounting to \$1,250,000. The cost of the work being done at present, according to his recent statement to the commission, is about \$235,000 a month. In the 21 months since the beginning of construction about 135,000 linear feet, or 25.6 miles, of sanitary sewers and storm-water drains have been completed at a cost of \$2,474,557.98, and involving the excavation and placing of 527,744 cubic yards of excavation, 181,174 cubic yards of embankment, 58,853 cubic yards of concrete and 7636 cubic yards of brick work, including the work at the disposal site. At present there are engaged in the work about 1700 men, 141 teams, 64 engines, boilers and pumps, 2 steam rollers, 4 steam shovels, 6 trench machines, 35 diggers, scrapers, etc.; 10 concrete mixers, 5 derricks, 8 cableways, 10 locomotives, 92 dump cars and 4 miles of railway tracks operated by contractor. The total value of contracts let to date is \$4,132,998.73, divided as follows: Sanitary sewers, \$3,107,000.18; land and rights of way, \$338,012.79, and storm-water drains, \$687,985.76.

Southwestern Irrigation.

One of the attractions of the Sixteenth National Irrigation Congress at Albuquerque, N. M., September 29-October 10, will be the opportunity given to study some of the big irrigation projects under way in the Southwest. Excursions from Albuquerque have already been arranged to Las Cruces, N. M., to view the Engle project; to Pecos valley to see results under the Carlsbad and Hondo projects; to Las Vegas, Springer and Raton, N. M., for dry farming and local irrigation; to the great dam built for the Zuni Indians; to the Roosevelt dam in Salt river valley near Phoenix, Ariz., and to other points. It is estimated that aside from what the general Government is doing in this field, more than 15,000,000 acres of land in the West has been reclaimed by irrigation at a cost of \$100,000,000, and that the land is watered from 215,000 miles of canals, nearly equal in aggregate length to the total mileage of railroads in the United States. Nearly half of this irrigated area is in territory tributary to the Atchison, Topeka & Santa Fe Railway system and its connections, and in view of that fact that railroad has issued an attractive folder for the special benefit of delegates to the Irrigation Congress.

Enterprise Working.

[Pittsburg Gazette-Times.]

Resumption of large enterprises, the July bookings of the United States Steel Corporation, plans for new industrial plants to cost from a million to several millions of dollars are the spectacular features of a return to normal times. If the spectacular was the whole of it, it would not mean a great deal after all. It is the multitude of small and active enterprises which sow and reap that are the truest indication of conditions. They make the business for the giant organizations,

whether transportation lines or industrials. If the little ones are not active the activity of the big ones is not likely to be continuous. As to which is cause and which effect we leave the experts to decide. As an evidence that prosperity is being generally distributed from the top down or from the bottom up or in both directions simultaneously we have advance sheets of an article to be published by the MANUFACTURERS' RECORD of Baltimore. This publication devotes itself particularly to the Southern field, and carefully surveys the South for all evidences of enterprise. We note that from its home office in Baltimore to Tampa, Fla., and west into Texas there is increasing activity, some of it of a public character in the form of additions to municipal works, and much more of it private investment. A power company at Houston, Texas, heads the list with a \$1,000,000 plant, but the others range from \$250,000 enterprises down to \$11,500, thereby indicating that the spirit of enterprise is working among small investors. Less elaborate advices from other sections testify to the generality of the disposition among persons of comparatively small means to get busy. These signs of the times are more than encouraging; they are inspiring.

Reinforced Concrete: A Manual of Practice. By Ernest McCullough, C. E.* author of "Engineering Work in Towns and Cities," "The Business of Contracting," "Municipal Public Works," "The Vrooman Act," "Engineering Contractors' Pocketbook," etc. Published by Cement Era Publishing Co., Chicago, Ill.

There is always a demand for illuminating information treating in a practical as well as in a theoretical manner the best practices of reinforced concrete construction. Perhaps too many of the publications on this subject have been written in a technical vein, and usually far beyond the comprehension of the average practical man, so that this volume, written by a man having both practical and technical knowledge, but along lines easily understood by the average practical man, will prove of the more value by reason of such treatment. To give a thorough understanding of the principles of reinforced concrete and the best practices to follow without the technical reasons for them would be of comparatively small value, but the author has so handled this part of his subject and in such a clear and comprehensive manner that the practical reinforced concrete man will have no trouble in following and understanding it and in fitting himself to more proficiently handle his work and with the knowledge of knowing why he does certain things in a certain way, in addition to knowing how to do them. The work is divided into eight chapters, these being divided for convenient handling into the following subjects: Strength of beams; loads on beams; columns, walls, tanks and footings; design and cost; forms; the conduct of work, and tools. The intention of the sections on design has been to keep within the usual requirements of the ordinary conservative building ordinances of American cities. This explains the use of the straight-line formulas for stress and the limitations imposed by the employment of working stresses. In the sections on construction the principles stated are the result of personal experience, and apply to all manner of work in reinforced concrete. The author gives due acknowledgment to his son, George Seymour McCullough, for checking and recalculating the tables, many of which are original.

*Mr. McCullough has recently been made chief engineer of the Northwestern Expanded Metal Co., Chicago, Ill.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

BIG ELECTRIC PLAN.

Interurban Railway, With Light and Power Plant, Is Projected.

Mr. F. H. Shelton, treasurer of the Roanoke Railway & Electric Co. of Roanoke, Va., writes the MANUFACTURERS' RECORD about the Roanoke Traction & Light Co., which was incorporated last week by James P. Woods of Roanoke and others, and saying that the new company was organized for "corporate and financial purposes and does not carry with it at present any special new construction of any sort." Mr. Shelton's address is 1004 Pennsylvania Building, 15th and Chestnut streets, Philadelphia.

The Roanoke Traction & Light Co., according to a report from Richmond, Va., where the charter was obtained, owns valuable water-power on the James river above Lynchburg, Va., at or near a place called the "horseshoe." It was further reported that the company would immediately proceed to develop the property and furnish power, heat and light to the cities of Roanoke, Lynchburg and Clifton Forge, Va. The estimated length of the proposed line for construction is about 200 miles, including electric railway. The capital authorized is from \$500,000 to \$2,000,000. The officers are James P. Woods, president; R. C. Jackson, vice-president; James C. Martin, secretary and treasurer, the other directors being W. W. Coxe and Jos. H. Chitwood, all of Roanoke, Va.

It is understood that the Roanoke Railway & Electric Co. interests are back of the enterprise. R. D. Apperson of Lynchburg is president of that company; C. R. Miller of Philadelphia is vice-president, and J. W. Hancock of Roanoke is general manager. Mr. Shelton, as heretofore stated, is treasurer. Other directors are J. D. Horsley and R. C. Blackford of Lynchburg, R. M. Janney and D. J. Collins of Philadelphia.

Railway and Amusement Park.

The Lake View Tracement Co., Memphis, Tenn., has let a contract to M. J. Roach for the construction of its proposed line from Memphis to Lake View, Miss., 12 miles. The cost will be about \$189,000, and the line is to be completed by January next. Contracts for the electric plant and the rolling stock are yet to be awarded. R. F. Tate is president of the company and W. W. Hayden is chief engineer, both at Memphis. The line is expected to be put in operation next summer.

In connection with the opening of this railroad it is said that Horn Lake will be made a popular resort. It is contemplated to erect a large hotel, a bathing pavilion and a boathouse. An amusement park on the bluffs overlooking the lake is also projected. About \$100,000 may be spent. Louis Fritz and associates are said to be interested in these proposed features.

INCREASES CAPITAL.

Plans for Important Line from Albany, Ga., to St. Andrews Bay, Fla.

Mr. T. H. Hazelrigg, locating and consulting engineer, 126 East Market street, Indianapolis, Ind., writes the MANUFACTURERS' RECORD that the Georgia Southwestern & Gulf Railway Co., which proposes to build a line 160 miles long from Albany, Ga., to St. Andrews Bay, Fla., with a branch to Dawson, Ga., has amended its charter, increasing its capital to \$4,000,000, or not to exceed \$20,000 per mile, and it is also authorized to issue stock and bonds equal to that amount.

Mr. Hazelrigg also says that the company "does not contemplate construction or extension beyond its present proposed terminus, or beyond the indicated connections with operating trunk lines, where exchange of traffic may be mutually advantageous, in that this company offers to co-operating lines exceptional opportunities for export freights through an unexcelled deep-water port, and interior distribution by connecting transportation companies of import freight received through that port, as well as of a great tonnage gathered from a magnificent local section through which it passes.

"Government engineers are making a survey of St. Andrews Bay with a view to improving the harbor to meet possible necessity to accommodate the anticipated needs of traffic."

The present executive headquarters of the company are at Macon, Ga., Mr. W. M. Legg being president and general manager at 534 Washington avenue.

Lake Charles to Hecker and Kinder.

President W. P. Weber of the Lake Charles Railway & Navigation Co., recently incorporated, writes from Lake Charles, La., to the MANUFACTURERS' RECORD thus:

"The Lake Charles Railway & Navigation Co. operates from Lake Charles to Kinder, La.; by water from Lake Charles to Hecker, La., and at the present time we have 20 miles of standard-gauge railroad operating from Hecker, La., which we hope to extend in the near future five miles further into Kinder, La., and there it will connect with the Colorado Southern Railway. We will also connect with the St. Louis, Watkins & Gulf Railway at Edna, La.

"The proposed railway will be 25 miles long, which will connect with our barge line, which carries freight to Lake Charles, an additional 25 miles. Our line runs through virgin pine forests. All extensions will be made under the supervision of the general manager.

"The officers of the company are: W. P. Weber, president; George M. King, vice-president and treasurer, both of Lake Charles, La.; D. A. Kelly, general manager, Edna, La.; E. E. Gibson, traffic manager; W. D. Hoover, auditor, both of Lake Charles, La."

Two Lumber Roads Chartered.

T. J. Asher & Sons, who are in the lumber business at Wasito, Ky., have, it is reported, chartered two railroad companies as follows:

Kentucky Southeastern Railroad Co., capital \$50,000, to build 10 miles of railroad in Bell county, beginning near a point 500 feet south of milepost 205 on the Louisville & Nashville Railroad; incorporators, T. J. Asher, Robert Asher, G. M. Asher, M. Brandenburg and R. W. Creech of Wasito, Ky., and Wm. Low of Pineville, Ky.

Wasito & Black Mountain Railroad Co., capital \$50,000, to build a railway beginning at the same point as the other line and running up Cumberland river to Tom's creek, about 10 miles. The incorporators are the same as those of the first-named company, with the addition of A. J. Asher, Jr., of Wasito.

Cincinnati to Virginia.

A press dispatch from Frankfort, Ky., says that Harold R. Stone, Robert H. Lanyon, T. C. Bayland, S. W. Winn, J. W. Morrison, W. B. Gerber and Malcolm Stone of Chicago, who are promoting the proposed Cincinnati, Kentucky & Virginia Railroad, have been going over the route in automobiles and have conferred with president George B. Harper of the Frank-

fort & Cincinnati Railroad. Continuing, the telegram says:

"They propose to construct their line through the valley of the Licking river from Morgan county to Cincinnati, tapping one of the richest mineral and timber regions of the State.

"An ultimate extension of the road may be made through the Virginia mountains to the Atlantic seaboard. The western end will connect at Paris with Cincinnati, and thereby a complete route from the Atlantic to the Ohio will be secured. Connection can be made at Paris with the Frankfort & Cincinnati, and this city thereby be put in direct connection with the new line.

"The promoters say that they will push matters at once, and hope to get the road opened up as soon as possible."

As heretofore stated, the Licking River Railroad, of which H. R. Stone is president, will be made part of the line.

Lexington to Nicholasville.

Mr. John Blair MacAfee, vice-president of the Lexington & Interurban Railways Co., 3d and Walnut streets, Philadelphia, writes the MANUFACTURERS' RECORD that the contract for the extension from Lexington to Nicholasville, Ky., has not yet been let.

This line projected, according to a report from Lexington, Ky., will be 12 miles long, and it is said that each contractor bidding will be asked to make two bids, one for the entire work as a whole and the other itemized, each to cover grading, track and overhead work. It is said that a number of bids are already in.

The Combs Lumber Co., which has the contract to build the new car barn and repair shop of the company on Loudon avenue in Lexington is reported to have begun work.

Paris to Bogota, Texas.

W. B. Rollins of Kansas City, Mo., is quoted as saying that the Texas Union Traction Co. of Paris, Texas, is to build a standard-gauge electric railway from Paris to Bogota, Texas, about 25 miles. Eventually the line is to be extended 25 miles more in the same direction to connect with a steam railroad. He is further reported as saying that the line now to be built will run through a rich farming country at present with only meager railroad facilities. Preliminary surveys are completed, but no contracts are let. The power plant will be at Paris, and the line will be operated by the overhead trolley system. C. P. Moore of Longfellow, Texas, is president, and John T. Upchurch of Clarksville, Texas, is treasurer.

Building a Tramroad.

With reference to the report that a tramroad would be built from Maurice to Landry, Texas, to connect with the Orange & Northwestern Railway, Mr. A. C. Barber writes from Cleburne, Texas, to the MANUFACTURERS' RECORD that the Barber Lumber Co. of Hartburg is building such a line into its timber lands. The railroad is only for the purpose of hauling logs to the mill, and at present will be only three miles long. It is standard gauge, however, and it is being built in the direction of the Orange & Northwestern Railway, which is seven miles away. It is not intended to be operated as a common carrier, but simply as a tramroad for lumbering purposes.

Franklin to Leatherwood.

The Middle Tennessee Railroad Co., which was incorporated last fall, is reported to be making good progress on the construction of its line from Franklin, Tenn., to Leatherwood, Tenn., about 20 miles. This is in Hickman county. Contractors are at work on the Franklin end,

and engineers are making the location at the Leatherwood end. Meade Frierson, one of the incorporators, is reported to have charge of the construction, and it is said that the line will be extended from Leatherwood to Corinth, Miss., running within five miles of Primm Springs. The line will develop phosphate lands.

Gasoline Street Cars.

Mr. H. W. Peterman, Mt. Pleasant, Texas, writes the MANUFACTURERS' RECORD thus: "The street railway proposed for the city of Mt. Pleasant is to be about four miles in length; will run on all principal streets, and to Red Springs Lake and Delwood Park, about one mile from the city. Construction is expected to begin within one month from date. Gasoline motor cars will be operated on the line."

Yards, Shops and Electric Plant.

A report from El Reno, Okla., says that the Chicago, Rock Island & Pacific Railway has begun work on its yards there, and W. E. Ballantine of Chicago, chief electrical engineer of the company, is arranging preliminaries for installing an electric power-house which will have a plant for lighting the roundhouse and shops and also for operating some machinery therein.

New Equipment, Rails, Etc.

The Atlantic Coast Line is in the market for 500 box cars, for which specifications are being prepared.

The Central of Georgia Railway is reported to be getting prices on passenger cars.

The Baltimore & Ohio Railroad has ordered 14,500 tons of rails for this year's delivery from the Maryland Steel Co., the Bethlehem Steel Co. and the United States Steel Corporation.

The Fayetteville Street Railway & Power Co., Fayetteville, N. C., will, it is reported, purchase a 40-horse-power gasoline motor car.

Into Birmingham Soon.

President H. M. Atkinson of the Atlanta, Birmingham & Atlantic Railway is reported as saying that its passenger and freight trains will be running into Birmingham, Ala., soon after September 1—certainly not later than September 15, by means of a connection with the Louisville & Nashville Railroad at Pelham, Ala., to which point tracklaying on the new road is rapidly progressing.

Extension Plans Denied.

An official of the Atchison, Topeka & Santa Fe Railway writes the MANUFACTURERS' RECORD denying the press report that an extension of the Tonkawa branch was contemplated to Perry, Okla. He says there is nothing in it, and he has never heard the matter discussed.

Railroad Notes.

According to a dispatch from Austin, Texas, the Brazos Valley, Brenham & Gulf Railroad Co. has filed a certificate announcing that it has dissolved. It was chartered in April of last year to build a line from Brenham to Waco, Texas, 121 miles, the incorporators being F. W. McGuire of Dallas, Texas; John H. Baker of Topeka, Kans.; D. E. Teague and others of Brenham, Texas.

Mr. James F. Heyward has been elected vice-president and general manager of the Maryland Electric Railways Co., with headquarters at Baltimore. Several years ago he was general manager of the City & Suburban Railway of Baltimore, but resigned shortly after that road was merged into the United Railways Co. He has recently been in the street-railway business in Oil City, Pa.

MECHANICAL

A Practical Gasoline Rock Drill.

Rock drills operated by gasoline have been invented by L. L. Scott, a manufacturer of gas engines at Joplin, Mo. Mr. Scott conceived the idea of a gasoline rock drill some years ago, and realizing the importance of such a machine to the mine operator in the way of cost of equipment, he began an investigation which resulted in building the two drills illustrated herewith.

It was found that none of the types of

impulse on every down stroke. Slideways are cast on the main cylinder casting and are made to fit in standard air-drill shells. The ordinary screw-feed arrangement is used to feed the drill into the rock.

The drill has been found practical in every respect and was exhibited at the American Mining Congress, attracting much attention. It was found, however, that to meet the requirements of every kind of work it would be necessary for the drill to receive an impulse on every up and down stroke. The drill had too many outside moving parts. The weight

cooled. Its advantages over first drill are as follows:

The drill receives an impulse on every up and every down stroke; its moving parts are entirely enclosed in the drill castings, which are water and air tight; there are also new methods of placing the charge which greatly increase the efficiency of the motor, permitting a higher speed and more ease in starting; the rotating and cushioning devices are practically the same as in the first drill; the piston rod is swivelly connected to the piston, and by a novel rotating device the stuffing-box at the lower end of the drill

as any air drill, and contains in itself the complete power plant necessary to operate it. It will save from 50 to 80 per cent. in fuel, besides eliminating the necessity of installing a boiler, compressor, receiver, pipe lines, maintenance and depreciation of plant and the salaries of the men necessary to operate the power plant."

Mr. Scott has not yet arranged to manufacture this drill, but will organize a company to place it on the market as soon as possible. It is interesting to add that Mr. Scott is now developing a 100-pound "stope" drill to compete in the con-



FIG. 1.—A PRACTICAL GASOLINE ROCK DRILL.

gas engine then in use were adapted to this class of work, and after several months of designing the drill shown in Fig. 1 was built.

The engine of this drill is what is known as the two-cycle type. The mixed charge is drawn into the cylinder at the lower end of the drill, where it is compressed. It is then passed through a pipe on the outside of the drill to the explosion cylinder at the upper end of the drill, where it is exploded. The ignition is by a jump spark, with a special timer, and a soot-proof plug.

The rotating device is located in the compression chamber at the lower end of the drill. This chamber is kept cool by the incoming charge, while the explosion chamber was designed to be water cooled. It was found, however, that air cooling was sufficient.

The piston rod is swivelly connected to the piston, making its rotation independent of the piston. The piston rod is cushioned at both top and bottom to relieve the bearings from the shock of the blow. The general construction of the drill permits of a high pressure in the lower charge-receiving cylinder, which insures a quick transfer of the full charge to the explosion chamber. The result of this action is high speed and power.

The drill is valveless and receives an

of the machine was 300 pounds, which was not excessive, but a lighter, yet more powerful, drill was desired. In studying the requirements for a successful gasoline-driven rock drill the following features were found necessary:

Drill must receive an impulse on every up and every down stroke; must contain no valves or other delicate parts; all moving parts must be enclosed so as to be water and air tight; must be powerful enough for all classes of mine and quarry work, yet light enough to be handled by

two men; must have explosion chambers arranged so that heat will not affect the rotating device or the piston rod; a short, rapid stroke is more desirable than a long, heavy stroke; must be connected with a crankshaft, free piston impossible; the piston rod must be cushioned on both top and bottom to protect the bearings from the force of the blow and the inertia of the return stroke.

The drill shown in Fig. 2 was then designed and built with these points in view, and experiments with it show that it fulfills all of these requirements. Its weight is 174 pounds. Both cylinder are air-

can be made very short, making the swivel more effective.

The pistons are four inches in diameter and have 300 pounds explosive at every up and every down stroke. The drill can be run at any speed up to 2000 strokes per minute. The high pressure prevents the drill hanging in the hole on account of breaking into a crevice, and the powerful back stroke prevents the accumulation of cuttings in the drill hole.

The advantages claimed over the air

test (for \$25,000) under the auspices of the Transvaal Chamber of Mines of South Africa.

The Drawe Sampler.

The Drawe sampler is a new device invented, patented and now being marketed by Julius J. Drawe, chief inspector of the cottonseed-products department of the Board of Trade, New Orleans, La. With this sampler, which is about nine feet long, and which has a readily-controlled valve

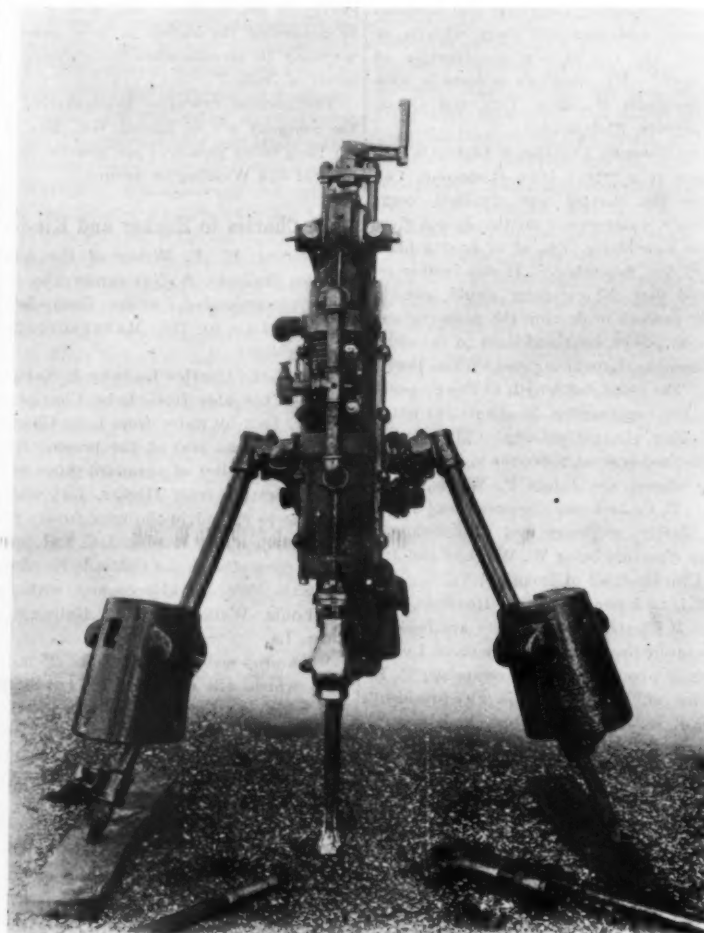


FIG. 2.—A PRACTICAL GASOLINE ROCK DRILL.



THE DRAWE SAMPLER.

drill are: Non-rotating piston, which avoids the wear and friction on pistons and rotating device; location of rotating device, being at lower end of machine, avoids torsion of piston rod; swivel connection between piston and piston rod prevents any cramping of piston and consequent bending of piston rod; absolutely impossible to knock out a cylinder-head; counterbalanced so that excessive vibration is eliminated; does not freeze.

Mr. Scott says:

"Besides these qualities, this drill has the advantage of low first cost of equipment. It can be manufactured as cheaply

at the lower end, it is possible to obtain a sample of the contents of tanks, barrels, cars or vessels. While born of the eight years' experience Mr. Drawe had as chief inspector in the sampling of cottonseed products, where he had found it impossible to obtain anything like a correct sample of oil and soap stock with the devices available, the Drawe sampler was primarily intended to fill the want thus made manifest. On trial it is found to not only perfectly serve the original purpose, but to also be equally well adapted to the sampling of grain, as well as all kinds of oils, particularly fuel petroleum.

In use the sampler is inserted in a tank, car or vessel, with the valve at the bottom open. This valve is controlled by a lever at the top of the sampler. By allowing the sampler to sink to the bottom of the tank, car or hold of vessel a column of the oil, soap stock or grain is secured. By closing the valve, when the sampler has reached the bottom of the tank, vessel or car, the sample of the various strata contained therein is secured, and on removing the sampler it may be laid lengthwise, a slide running the entire length drawn out and the contents of the tank, vessel or car revealed.

Twenty-one Excelsior Machines.

People who are interested in excelsior-manufacturing equipments will find their attention attracted to the accompanying illustration of 21 excelsior machines installed in one battery at Peterboro, N. H. The company operating these machines

to withstand the working strains, and are carefully mortised and securely bolted together.

"The crankshaft bearings are very heavy, of the bracket chain-oiling type, lined with babbitt and provided with improved screw adjustment for taking up wear and lost motion.

"The guides are steel, of such form as to insure the greatest strength and accuracy. These, together with the feed rolls, cutter plate and other working parts, are mounted on a substantial self-contained cast-iron frame, thus securing accurate alignment, rigidity, perfect cutting and durability.

"The sliding frame, which carries the adjustable feed roll, is planed to accurately fit the slides on the cast-iron frame, preventing side motion, thus causing the spurs to cut in the same slit in the wood every stroke, and insuring a clean, uniform and superior grade of excelsior and mak-

feed-change gears, suitable for the usual grades of excelsior, go with each machine.

"A complete plant consists of the battery of machines, a wood-splitter, cut-off saw, baling press, knife and spur grinder and the necessary power with shafting, hangers, pulleys and belting.

"Wood should be cut with square ends, and may be any length from 15½ to 18 inches long and any size up to 6 inches. Round wood 6 inches diameter or less need not be split, and when straight and free from knots makes a superior grade of excelsior. Machines can be arranged to take wood from 10 to 18 inches long.

"A cord of good wood will make about 2000 pounds of excelsior.

"One man can feed six or seven machines. Knives and spurs should be kept sharp and in good condition to obtain best results.

"The peculiar construction of our machines makes it practicable for those de-

inches and less in size. In piling wood, the bark side should be up after peeling. Wood is barked by using a draw shave. In order to have wood in best shape it should be stripped in the woods as soon as bark will peel. In the spring the timber should be cut down, bark stripped off and left until bark will not peel, then that cut down and peeled can be cut to length, sawed and piled to dry. Wood works better and makes a better grade of excelsior when kept covered after being cut. When this is done and the knives and spurs kept in good shape and machine properly cared for, the output will be increased, better goods produced and less power required. Wet, water-soaked, soggy or particularly rotten wood should never be used. These machines will cut green wood and all kinds of wood, and will make every grade of excelsior known in the market, including the long-fiber dustless, that commands the highest prices."

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Richmond's Building Record.

For the year ended July 31 records of the building inspector of Richmond, Va., indicate that building operations in that city exceed a valuation of \$3,000,000. The value of operations during July amounted to more than \$500,000, including new construction work, alterations and repairs.

Lumber Notes.

Lumber and timber shipments from New Madrid county, Missouri, last year amounted to 86,008,000 feet, valued at \$2,588,170.

It is announced that S. E. Naylor & Co. of Gulfport, Miss., have received an additional contract to furnish 400,000 feet of lumber to the Isthmian Canal Commission, delivery to be made at Panama.

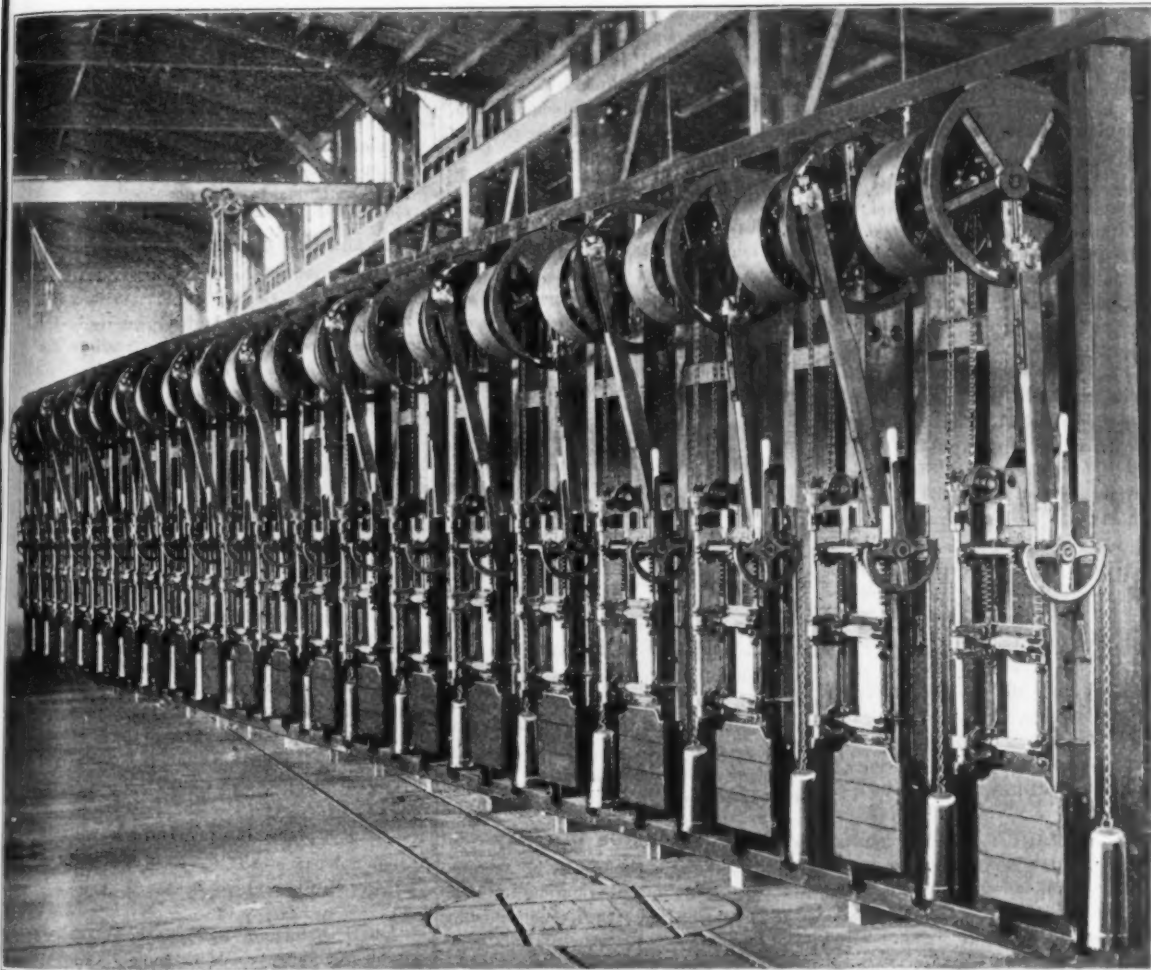
The Latcher & Moore Lumber Co. of Orange, Texas, which was recently reported as purchasing 55,000 acres of timber land in Graham county, North Carolina, informs the MANUFACTURERS' RECORD that it has not purchased any land in North Carolina, and does not expect to do so.

International Car Co.

It is stated that the International Car Co. is planning to install a modern electrically-driven plant for its proposed car and locomotive shops. It has effected organization with C. A. Ralston of Ralston & LeBaron, Chicago, Ill., as president; A. T. LeBaron of the same firm, vice-president and general manager; J. C. Flett, mechanical engineer of New York, secretary, and A. Wagnath, vice-president of the Teutonia Bank, New Orleans, treasurer. Several weeks ago the MANUFACTURERS' RECORD announced the incorporation of the International Car Co., capitalized at \$250,000, to build shops for constructing and repairing locomotives, cars and other railway equipment; New Orleans offices in the Louisiana Bank & Trust Building.

Drainage and Roads.

The Mississippi Valley Drainage and Highway Association at its recent session at Memphis, Tenn., re-elected Messrs. O. W. Killough of Wynne, Ark., president; Bolton Smith of Memphis, Tenn., first vice-president; J. F. Hunter of Memphis, Tenn., treasurer; J. S. Warren of Memphis, Tenn., secretary, and two vice-presidents for Arkansas, Louisiana, Mississippi, Missouri and Tennessee, with Col. Jerome Hill of Memphis chairman of the executive committee. Formation of drainage and good roads clubs in all the drainage sections was urged by the association.



A BATTERY OF TWENTY-ONE EXCELSIOR MACHINES.

had used machines of other makes for years, and ordered the new battery after investigation, tests and comparisons. The machines chosen are built by the American Sawmill Machinery Co. of Hackettstown, N. J., with New York office at 50 Church street. In describing the American Excelsior Cutting machine, the builder says:

"In our improved machines we believe we are offering the excelsior manufacturer the best machine on the market. We have spared neither time, patience nor expense in bringing it to a state of perfection.

"These machines are built throughout of the best obtainable materials and in the most thorough manner. They are heavy, strong, durable, and embody every improvement which the experience of practical excelsior makers and the best experts in this line in the United States have demonstrated as most desirable and necessary in such a machine. They will work equally well hard or soft woods.

"The wood frames are constructed of best selected timber of ample proportion

ing it possible to produce the finest grades of wood wool.

"The slides or bearings on the cutter plate cover a space of about 20 inches on the guides, and are of such form as to maintain the perfect working of the knife and spurs and permit of all lost motion and wear to be easily and quickly taken up. Lubrication is positive, and is distributed the entire length of the guides.

"Our improved feed is the crowning feature. All the objectionable features of the old-style feeds have been eliminated. It is positive, accurate and in easy reach of the operator, and can be kept thoroughly lubricated at all times, preventing excessive wear and annoyance. It is quickly and easily adjusted for all grades of excelsior, the change from one grade to another being made in five minutes or less. These points will be greatly appreciated by all practical excelsior makers. The machines are furnished single, or as many in one frame as desired up to 24.

"One knife, two spur boxes and two

siring to do so to buy the iron parts only and construct their own woodwork from drawings which we furnish, and thus obtain accurate working machines, while saving in first cost and freight."

"Almost all kinds of wood are now used for making excelsior. In the North and East popple, basswood, birch, soft maple, second growth white ash, cherry, spruce, pine, etc. In the West and South cottonwood, cypress, willow, hackmatack, long and short leaf pine, black and sweet gum, poplar and basswood and several other woods make good excelsior. The excelsior made from Southern pine finds a ready market, and is quite as good as that made from white pine.

"Wood for excelsior is cut and split same as wood for market, usually 54, 36 and 18 inches, then sawed with a circular saw to right length for machine. Round wood makes a superior grade of excelsior, and can be used, when straight and free from knots, as small as three inches in diameter. It need not be split when six

MINING

Tennessee's Coal.

The output of the Tennessee coal mines in 1907 amounted to 6,810,243 short tons, having a spot value of \$8,490,334, showing an increase of 550,968 short tons, or 8.8 per cent., in quantity, and of \$822,919, or 10.73 per cent., in value, over the production in 1906. About 40 per cent. of the output of the Tennessee mines is used for railroad fuel, 15 per cent. is taken by the comparatively restricted local market of the eastern part of the State, and the rest of the product is marketed in competition with coals from Alabama and Southern Kentucky. About 4400 square miles of Tennessee are underlain by coal measures, and approximately half of this area contains workable coal beds. These coal-bearing rocks extend entirely across the State in a northeast-southwest direction. The belt is 70 miles wide at the Kentucky line, and is there practically continuous; at the Georgia-Alabama line its width is about 50 miles, and only the highest land is occupied by the coal measures. Mr. M. R. Campbell of the United States Geological Survey has estimated that these coal beds contained originally 25,665,000,000 short tons of coal, of which less than one-half of 1 per cent. had been exhausted up to the close of 1907.

Texas' Output of Coal.

The production of coal in Texas in 1907 was greater by 25.53 per cent. in quantity and 27.53 per cent. in value than that of 1906, according to E. W. Parker of the United States Geological Survey, amounting to 1,648,069 short tons, having a spot value of \$2,778,811. This increase in the coal output is largely the result of the condition of the petroleum industry in the State in the last two years. In 1906 the output of petroleum was 60 per cent. less than in 1905, and the coal output showed an increase of 112,189 short tons. In 1907 the production of petroleum was about the same as in 1906, the decrease being insignificant, but the advance in the price of fuel oil in the State was so decided that a number of railroads returned to coal for locomotive use, and the effect on the coal industry is shown by the figures given above. Coal or lignite was produced in 16 counties of Texas in 1907, or three more than in 1906.

Lignite for Power Fuel.

The United States Geological Survey has been experimenting with the gas producer and gas engine for several years, and the tests in the gas producer at the Government plant have shown that many fuels of such low grade as to be practically valueless for steam-furnace purposes, including slack coal, bone coal and lignite, may be economically converted into producer gas and may thus generate sufficient gas power to render them of high commercial value. In this way lignite beds underlying from 20,000,000 to 30,000,000 acres of public lands, heretofore supposed to have little or no commercial value, are shown to have a large value for power development. This is of importance to the West, and makes possible a great industrial development there. The Geological Survey recently issued a bulletin on the "present status of the producer-gas engine."

To Develop Kentucky Coal Lands.

An important industrial development in the vicinity of Hindman, Ky., as reported in a dispatch from that city, is about to be undertaken by O. P. Rollins of Jacksonville, Fla., who owns a large area of coal lands near Hindman. It is stated that Mr. Rollins contemplates the development of his property in the near future, and is

also considering the construction of a railroad from Jackson, Ky., up the North fork of the Kentucky river via Hazard and Whitesburg, through the Boone Fork and Elkhorn coal fields.

To Quarry Marble in Alabama.

The Alabama Marble Co. has been incorporated with a capital stock of \$3,000,000 to quarry marble, stone and building material in Alabama. Among its incorporators are John Stephen Sewell of Gant's Quarry, Ala., telegraph office, Sylacauga, Ala.; John Kerr Branch of Richmond, Va.; Henry Evans, G. Trowbridge Hollister, George D. Mackay, Eugene Meyer, Jr., and Henry K. Pomeroy, all of New York city.

Southern Coal & Lumber Co.

The Southern Coal & Lumber Co. has been incorporated with a capital stock of \$1,000,000 by A. Stanley Stanford, Philadelphia, Pa.; B. R. Hutchcraft, Lexington, Ky., and J. K. Carpenter, Gaffney, S. C. Offices at 224 South Broad street, Philadelphia, where Mr. Simmons can be addressed.

To Develop West Virginia Lands.

It is reported that the Reed Coal & Land Co. is planning to develop its coal properties in McDowell county, West Virginia, estimated to contain 25,000,000 tons of coal. This company's offices are in the Columbus Savings & Trust Building, Columbus, Ohio, and L. B. Tussing is president.

Mining Notes.

The War Eagle Hydraulic Mining Co. of Rutherfordton, N. C., has been incorporated with a capital stock of \$200,000 by Messrs. Henry Briggs, T. C. Stone and E. M. Carpenter, all of Greenville, S. C., and associates.

The American Mining & Smelting Co. of Richmond, Va., has incorporated with a capital stock of \$100,000. Its officers are Messrs. F. C. Kipper, president; Spencer Cornick, treasurer, and W. P. Arwood, secretary.

Messrs. L. T. Richardson and Walter Isbell of Jacksboro, Texas, and J. W. Pinson of Dallas, Texas, have incorporated the Jacksboro Stone & Manufacturing Co. of Jacksboro, with a capital stock of \$100,000.

The Georgia Pyrites Co. has incorporated at Jersey City, N. J., with a capital stock of \$25,000 to operate pyrite mines, etc. Its incorporators are B. S. Mantz, L. H. Gunther and J. R. Turner, whose exact addresses are not announced.

The MacAlpin Coal Co. of Thurmond, W. Va., has been incorporated with a capital stock of \$100,000 by W. T. Green of Hinton, W. Va.; W. V. Dunlap, Rush Run; James Martin, Dun Loop; James M. Laing of Charleston, and W. H. Warren, Richmond, Va.

Cascade Power Co.

A charter of incorporation has been granted to the Cascade Power Co. of Brevard, N. C., the authorized capital stock being \$300,000. Messrs. W. P. Whitmore, J. C. Hollis, J. A. Galloway and associates are the incorporators.

Cotton-Oil Mill Directory.

The Cotton Publishing Co. of Atlanta, Ga., has issued the 1908 edition of the Cotton-Oil Mill Directory. Its publication has been carefully prepared, and lists nearly 900 mills.

Mr. R. C. Hicks has been appointed soliciting agent of the Piedmont Air Line and of the Asheville Line, with headquarters at 119 East Baltimore street, Baltimore, Md.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

To Increase Capital and Enlarge.

The Hampton Cotton Mills of Hampton, Ga., will increase capital stock from \$100,000 to \$150,000 and enlarge its present plant, increasing to an equipment of 10,000 spindles, manufacturing high hosiery yarns wound on cones. The company will build by day labor an addition to present building, to be 75x250 feet, and install 4000 spindles, with the accompanying carding, picking and winding machinery. Contract has been awarded for the new machinery. Steam power is used and the present power plant is sufficient. John Hill (of the Lowell Machine Shop, Lowell, Mass.), Atlanta, Ga., is engineer in charge.

Big Sale of Texas Wool.

A dispatch from Austin, Texas, says: "The sale of 1,250,000 pounds of wool by Charles Schriener of Kerrville, Texas, to Boston, Mass., buyers is announced. It is one of the largest wool sales ever made in Texas. The price paid is said to have ranged from 17 to 23 cents per pound. The wool was all of this year's clips."

Gaffney Manufacturing Co.

The Gaffney (S. C.) Manufacturing Co. is moving machinery from its old mill building to its old finishing mill building in order to rearrange the equipment to better advantage. When conditions justify it the company expects to add from 12,000 to 15,000 spindles.

A \$100,000 Mill Company.

Archibald Meldrum and associates of Zebulon, N. C., propose organizing a company with capital stock of \$100,000 to build a cotton mill next year. Hosiery yarns will be manufactured and possibly sheetings also.

Southern Textile Directory.

The Cotton Publishing Co. of Atlanta, Ga., has ready for distribution its 1908 edition of the Southern textile industry. This publication has been carefully compiled, and lists nearly 1100 mills.

The Mt. Holly Cotton Mills.

The Mt. Holly Cotton Mills of Mt. Holly, N. C., has been incorporated with a capital stock of \$100,000 by H. A. Rhyne, E. R. Cannon and A. P. Rhyne.

The Albion Cotton Mills Co.

The Albion Cotton Mills Co. of Mt. Holly, N. C., has been incorporated with a capital stock of \$100,000 by A. P. Rhyne, H. A. Rhyne and E. R. Cannon.

Textile Notes.

It is reported that J. A. McMahon of the Nashville Woolen Mills, Nashville, Ark., will establish a woolen mill at Malvern, Ark.

The Commercial Club of Ardmore, Okla., is reported to have closed contract for the location of a cotton mill by New England capitalists.

The Orion Knitting Mills of Kinston, N. C., mentioned last week, has increased capital stock from \$50,000 to \$100,000. The company is installing some machinery to replace wornout equipment.

FOREIGN LETTERS

The MANUFACTURERS' RECORD is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. Some of these letters indicate the disposition of foreigners to buy American goods, and are therefore of interest to our readers.

Greece Wants American Manufactures.

Nicolas T. Karameros, Rue Aristotle 15, Athens, Greece:

"Seeing that trade between Greece and the Orient generally and the United States is always growing in progress, and hoping that very soon the importation of American goods will be greatly extended in our country, I should like to enter into commercial connections as agent with good manufacturers of the following articles, and also with good exporters: Leather of all kinds, oleo oil, cloth, rubber overshoes, hardware and newspaper of 44-50 gr. per square meter.

"In all above articles I can promise a very important business if prices can keep up against competition, and this I do not doubt.

"I shall feel much obliged if you will be kind enough to give me your protection in order to enable me to fulfil my aim."

Cotton and Fish Oils and Bone Grease

Bart. Carrea, Vico del Conservatori del Mare, N. 9-7, Genoa, Italy:

"I am open for any American firm dealing in bone grease and all other materials for soap-making. Fish and cotton oils are also of interest to me. So should you hear of any firm wanting an Italian agent I shall be glad if you will remember my name. Should any of your enquirers want my references you can address them either to the Italian Chamber in New York or Cesare Conti, 35 Broadway, New York."

Inks, Chemicals and Felts.

Trust Mecanografico, 11 Hortaleza, Madrid, Spain:

"We take the liberty of asking you to send us the addresses of leading makers of aniline inks, felts and chemical products in your country; also direct me to the most important work in English on the manufacture of inks for typewriters."

Motor Vehicles for India.

John Sanderson of B. S. Cohen, Ltd., 15 Clerkenwell Close, London, E. C., England:

"I have an inquiry for a buggy motor suitable for rough roads in India. Can you please put me in communication with makers of same, or ask them to send me prices and description."

Upper and Sole Leather.

Emil Grube & Co., 11-12 Cremon, Hamburg, Germany:

"We are interested in finished leather—upper and sole leather. If you would make it possible to secure for us an agency for a leading house in this trade we would thank you very much."

For Twist Drill Manufacturers.

Guevara y Compania, Plaza de Albia No. 1, Bilbao, Spain:

"We shall feel obliged to you by your letting us have the names of some people manufacturing twist drills, etc., besides Morse Co. and Standard Tool Co."

Scales and Meat Cutters.

J. B. Th. de Logie, Boulevard Pons, 6, Marseille, France:

"Kindly give me the addresses of the makers of Dayton automatic scales and machines for cutting meat."

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

BRIDGES, CULVERTS, VIADUCTS

Amarillo, Texas.—O. W. Butt, Kansas City, Mo., will, it is reported, establish \$150,000 packing plant at Amarillo.

Columbus, Ga.—City will have plans prepared by Edwin Tacher, president Concrete-Steel Engineering Co., New York, for bridge across Chattahoochee river at Dillingham street, estimated to cost \$110,000; Melan system of steel arch construction will be used. Mr. Tacher will have general supervision of work, and W. C. Campbell, superintendent of Public Works, will be in charge of details.

Conway, Ark.—Moravia Construction Co. (probably of Conway) has contract to construct five steel bridges at \$6720; James A. Lea, County Judge.

Douglas, Ga.—Augusta Construction Co. will award contract August 13 for construction of substructure and trestle approaches of bridge across Altamaha river now under construction between Hazlehurst and Vidalia, Ga.; work will comprise founding and building of six concrete piers and about 2000 feet of timber trestle approach. G. B. Hazlehurst of Douglas is chief engineer. (See "Machinery Wanted.")

Durant, Okla.—Bryan county will award contract August 20 for furnishing and erecting superstructure of two 130-foot-span steel bridges over Blue river, one near Blue and other near Bokchito, Okla.; also for construction of concrete foundations and abutments and steel tubular piers for bridges; J. M. Abbott, chairman Board of County Commissioners. (See "Machinery Wanted.")

Fayetteville, N. C.—Bridge committee, R. H. Buckingham, chairman, is receiving bids for erection of stone or steel bridge costing from \$2000 to \$3000; H. J. McBaile, City Clerk. (See "Machinery Wanted.")

Holdenville, Okla.—Hughes County Commissioners awarded contract to Missouri Valley Bridge & Iron Co., Leavenworth, Kans., for construction of three steel bridges—one near Wetumka, another near Spaulding and third near Citra, Okla.; reinforced-concrete piers; length of structures 511 feet, 205 feet of steel and 306 feet of wood approach; aggregate cost, excepting fills, \$4730.

Norfolk, Va.—City and Norfolk & Western Railway, N. D. Maher, general manager, Roanoke, Va., are considering construction of vehicle traffic bridge over railroad tracks at intersection of Pennsylvania avenue. It is proposed that present trolley-line bridge be extended so as to provide 16-foot driveway, city to furnish street and property rights and construct all approaches, and railroad company to supply steel spans over tracks, together with trestle construction within limits of its right of way; W. T. Brooke, City Engineer.

Salisbury, Md.—Wicomico county will construct steel-plate girder drawbridge over Wicomico river at crossing of Main street; contract will be awarded August 15; H. M. Clark, Roads Engineer, P. O. Box 424; William M. Cooper, president County Commissioners. (See "Machinery Wanted.")

Towson, Md.—Baltimore county will replace bridges destroyed by recent storm; Henry G. Shirley, roads engineer.

Waynesville, Mo.—Pulaski county awarded contract to Canton Bridge Co., Kansas City, Mo., for building two steel bridges; cost \$6526 and \$4275, respectively.

CLAYWORKING PLANTS

Eldorado, W. Va.—J. R. Randolph will, it is reported, establish brick plant.

Unlontown, Ky.—Unlontown Brick & Tile Co. incorporated with \$5000 capital stock by J. P. Bowers, Unlontown; W. R. Thomas, Morganfield, Ky.; R. L. Roberts, Waverly, Ky., and others.

COAL MINES AND COKE OVENS

Farmington, W. Va.—Georges Creek Coal & Iron Co., J. J. Alexander, president, 420-424 Equitable Building, Baltimore, Md., will sink additional shaft near present openings at Farmington, where 3500 acres of coal lands will be developed; mine will have capacity of 3000 tons daily.

Chattanooga, Tenn.—Grand View Coal & Timber Co., Robert Marshall, president, Hotel Theresa, will install aerial tramway system (Consolidated Aerial Tramway Co., Roanoke, Va.) to convey tan bark, timber and coal from its properties on Walden's Ridge, 1800 to 2000 feet high; construction has begun.

Hindman, Ky.—O. P. Rollins, Jacksonville, Fla., contemplates developing coal lands near Hindman.

Hoult, W. Va.—Hoult Coal & Coke Co., recently reported organized, etc., will not undertake developments at present. David C. Foltz of Dunbar, Pa., is president and Arthur K. Knotts of Unlontown, Pa., secretary.

Knoxville, Tenn.—Cherokee Coal Co. incorporated with \$5000 capital stock by E. H. Stegall, E. L. Davis, Robert S. Young and others.

Lexington, Ky.—Southern Coal & Lumber Co. incorporated with \$1,000,000 capital stock by B. R. Hutchcraft, Lexington, Ky.; J. K. Carpenter, Gaffney, S. C., and A. Stanley Stanford, Philadelphia, Pa.; offices at 224 South Broad street, Philadelphia, Pa., where Mr. Stanford can be addressed.

Louisville, Ky.—Drabelle-Yager Coal Co. incorporated with \$20,000 capital stock by S. Drabelle, C. J. Yager, John P. Davis and others.

Mansfield, Ark.—W. L. Seaman Company incorporated with \$50,000 capital stock by William L. Seaman, George C. Packard, Kirk Dixon and Charles H. Dixon.

McDowell County, W. Va.—Reed Coal & Land Co., L. B. Tussing, president, Columbus Savings & Trust Building, Columbus, Ohio, will develop coal land in McDowell county.

Middlesboro, Ky.—Colgan-Ingles Coal Co. incorporated with \$10,000 capital stock by A. C. Carr, P. T. Colgan and F. E. Hess.

Ozark, Ark.—Black Diamond Coal Co. incorporated with \$25,000 capital stock by W. R. Eustice, W. H. Eustice, H. Haggard and J. C. Harrod; offices at Altus, Ark.

Presidio County, Texas.—J. H. Adams, Kansas City, Mo., has, it is reported, purchased for development 135,000 acres of coal land in Presidio county.

Thurmond, W. Va.—MacAlpin Coal Co. incorporated with \$100,000 capital stock by James M. Laing, Charleston, W. Va.; W. T. Green, Hinton, W. Va.; James Martin, Dunloop, W. Va., and others.

CONCRETE AND CEMENT PLANTS

New Orleans, La.—Mills Concrete Block Co. incorporated with capital stock of \$5000; Chas. H. Mills, president; J. V. Leclerc, vice-president; Harry H. Maloney, secretary-treasurer.

Pierson, Fla.—W. H. Stone contemplates establishing cement roofing tile plant.

COTTON COMPRESSES AND GINS

Athens, Ga.—Athens Compress Co. is name of company recently noted to be organized with \$100,000 capital stock; will erect cotton compress; capacity, 700 bales per day; cost of buildings \$25,000; cost of machinery \$25,000; John R. White, president; B. F. Hardeman, secretary and treasurer.

Hawkinsville, Ga.—Farmers' Union will establish cotton ginnery; eight 60-saw gins will be installed; capacity, 60 bales per day.

Hubbard City, Texas.—Hubbard Farmers' Co-operative Gin Co. incorporated with capital stock of \$15,000 by S. E. Johnson, Sr., S. E. Johnson, Jr., Percy Wood and W. McKean.

Port Arthur, Texas.—Govin Bros., recently reported to establish cotton ginnery, will erect three buildings—26x50 feet, 24x40 feet and 20x30 feet; ordinary construction; capacity 50 bales per day; cost of building \$2600; cost of machinery \$2000; J. C. Govin, engineer in charge.

Polkville, Miss.—Polkville Union Mill & Gin Co. incorporated with \$10,000 capital stock by I. S. Lewis, O. P. Hales, H. J. Patrick and others.

Prattville, Ala.—Autauga-Elmore Gin & Warehouse Co. incorporated with \$8000 capital stock by McQueen Smith, W. Howard Smith, W. N. Smith and others.

ELECTRIC-LIGHT AND POWER PLANTS

Ashburn, Ga.—City will construct electric plant and water-works; bids will be opened August 12; J. B. McCrary & Co., Atlanta, Ga., are engineers; John J. Story, City Clerk. (See "Machinery Wanted.")

Basic City, Va.—City Council is considering installation of electric-light and power plant, and contemplates developing water-power property, securing about 500 horsepower; W. H. Page, Mayor.

Boonsboro, Md.—Antietam Electric Light & Power Co., H. L. Moser, secretary-treasurer, Hagerstown, Md., recently mentioned as having 10-year contract to furnish city with electric lights, has engaged Orville Shifler, Hagerstown, Md., as architect for power plant to be located on Antietam creek; building will be of ordinary construction; proposals for machinery opened August 1.

Brevard, N. C.—Cascade Power Co. incorporated with \$300,000 capital stock by W. P. Whitmore, J. C. Hollis, J. A. Galloway and others.

Bruner, Postoffice Houston, Texas.—Bruner Water & Light Co. has secured franchise from Harris County Commissioners to furnish water and light; will erect and equip electric power-house, construct wiring, etc.

El Reno, Okla.—Chicago, Rock Island & Pacific Railway, W. E. Ballantine, Chicago, Ill., chief electrician, is arranging preliminary work for installing 150-kilowatt electric plant in power-house at its El Reno yards; equipment will generate power to operate roundhouse and shops, furnish light, etc.

Fredericksburg, Va.—William C. Whitner, hydraulic engineer of Virginia Passenger & Power Co. of Richmond, Va., and president of Fredericksburg Power Co. of Fredericksburg, will supervise construction of dam across Rappahannock river, construction of which will soon be resumed; dam will be 800 feet long and 22 feet high, built of solid concrete, reinforced with steel; will be located about 50 yards from site of present dam, and increase capacity from 2000 to about 8000 horse-power; estimated cost \$50,000; will be completed about January 1, 1909. (The Frank J. Gould (New York) interests acquired rights to develop water-power of Rappahannock river about two years ago, when work on the dam was begun.)

Mammoth Cave, Ky.—Mammoth Cave estate, Albert Covington Janin, trustee, Silver Springs, Md., contemplates installing plant in early part of 1909 for illuminating principal features of cave; hotel will be lighted

with acetylene gas; improvements made in meantime will be of a tentative character.

Mt. Sterling, Ky.—Mt. Sterling Water, Light & Ice Co. has increased capital stock from \$250,000 to \$260,000.

Newport, Tenn.—Unaka Tanning Co. will erect electric plant to furnish power for operating its tannery and machinery of Chilhowee Extract Co.; dam will be constructed on Pigeon river for developing water-power.

Roanoke, Va.—Roanoke Traction & Light Co. incorporated with authorized capital stock of \$2,000,000 to operate lighting, heating and power plants in Roanoke, Lynchburg and Clifton Forge, Va.; James P. Wood, president; R. C. Jackson, vice-president; James G. Martin, treasurer, all of Richmond. Company is organized for corporate and financial purposes (no special new construction being contemplated) in the interest of Frederick H. Shelton, 1001 Pennsylvania Building, 15th and Chestnut streets, Philadelphia, Pa. He represents Lynchburg (Va.) Traction & Light Co., Petersburg (Va.) Gas Co. and other similar corporations.

Russellville, Ala.—City will award contract September 1 for construction of electric-light plant and water-works; \$24,000 of bonds recently reported voted; Prof. Edgar B. Kay, Tuscaloosa, Ala., is engineer in charge.

FLOUR, FEED AND MEAL MILLS

Charlottesville, Va.—Lovegrove Milling & Feed Co. incorporated with \$25,000 capital stock; J. W. Lovegrove, president; T. E. Poers, vice-president; O. B. Harris, secretary and treasurer.

Fifay, Fla.—Arlpeka Saw Mills considering installation of machinery for cutting forage, to grind corn and oats for 100 head of stock. (See "Machinery Wanted.")

Woodbury, Tenn.—Mountain Roller Mill Co. incorporated with \$5000 capital stock by N. G. Maddux, J. S. Denby, J. B. Hall and others.

FOUNDRY AND MACHINE PLANTS

Bridgewater, Va.—Plows.—Bridgewater Plow Corporation, incorporated to manufacture patented garden plow, has organized with John P. Burke president, Edward C. Martz vice-president, both of Harrisonburg, Va.; James A. Fry secretary-treasurer, D. S. Thomas general manager, both of Bridgewater.

Hattiesburg, Miss.—Machines.—Watkins Machine & Foundry Co. has increased capital stock to \$100,000.

High Point, N. C.—Central Foundry & Machine Co., lately reported incorporated with \$50,000 capital stock, organized with E. W. McClave as president and Wilkes McClave (formerly of McClave, Rimmer & Co., New York) as secretary-treasurer. Company has purchased and will operate High Point Machine Co. plant for manufacturing steam engines, sawmills, lath mills, box machinery, shingle machinery, bobbin lathes, centrifugal pumps, pulleys, hangers, etc., besides holding general mill and factory supplies for prompt shipment.

Martin, Tenn.—Brick Machinery.—T. J. Taylor and associate contemplate manufacturing and introducing newly-invented brick machinery; no arrangements completed as yet. (See "Machinery Wanted.")

New Orleans, La.—Railway Cars, etc.—International Car Co., lately reported incorporated with \$350,000 capital stock, will plan construction of buildings and prepare specifications for machinery for building and repairing cars, locomotives, etc.; equipment to include motor-driven machinery for wood and iron working, boilers, engines, dynamos, electric motors, etc.; several miles of yard trackage will be required; C. A. Ralston of Ralston & Le Baron, Chicago, Ill., president; A. T. Le Baron of same firm, vice-president and general manager; J. C. Flett of New York, secretary; A. Wagatha of New Orleans, treasurer.

Norfolk, Va.—Horseshoes.—Carney Adjustable Horseshoe Co. incorporated with \$25,000 capital stock; Charles H. Consovo, president; M. B. Long, secretary and treasurer; P. W. Carney, general manager.

Oklahoma City, Okla.—Fence Tools.—Oklahoma Combination Tool Co. incorporated with \$25,000; J. S. Wakefield, president, Mangum, Okla.; will establish plant to manufacture combination tool for fence-building, invented by O. A. Highsmith, Mangum, Okla.

Rockingham, N. C.—Foundry.—Rockingham Foundry & Machine Co., recently reported incorporated with \$800 capital stock, has elected W. N. Everitt president, W. A. Biggs secretary and treasurer; will erect two buildings, 50x100 feet and 50x125 feet; cost \$5000.

Rome, Ga.—Boilers.—D. J. Coughlin, lately reported as contemplating establishment of boiler works at Rome, is of Palatka, Fla., where he now operates a plant; has not decided as to Rome plant.

Tulsa, Okla.—Derricks.—Hines Manufacturing Co., Portland, Ind., contemplates establishment of plant for the manufacture of three-section steel derrick, ranging from 72 to 74 feet in height.

Winston-Salem, N. C.—Foundry.—Cook-Lewis Foundry Co., Greensboro, N. C., has purchased and will operate Forsythe Foundry and Machine Works; plant will be improved and enlarged; W. B. Cook will be manager.

GAS AND OIL DEVELOPMENTS

Bay City, Texas.—Dr. Brown Oil Co. incorporated with \$5000 capital stock by J. W. Brown, C. F. Baker and John W. Gaines.

Bay City, Texas.—Dawdy Hill Oil Co. incorporated with capital stock of \$10,000 by Fred S. Robbins and Gus Gottschalk of Matagorda, Texas, and others.

Gulfport, Miss.—Gulfport Oil, Gas & Mineral Co., Box 65, invites bids for drilling test well to depth of 2500 or 3000 feet, stating price per foot. (See "Machinery Wanted.")

Houston, Texas.—Hansen Oil & Development Co. incorporated with capital stock of \$10,000 by C. J. N. Hansen, D. H. Skinner and Edw. B. Colgin.

Muskogee, Okla.—Enechee Oil Co. incorporated with \$5000 capital stock by J. T. Mitchell, Thomas W. Leahy, Muskogee, and E. M. Murray, Bartlesville, Okla.

Ocheleta, Okla.—Drillers' Oil Co. incorporated with \$25,000 capital stock by Fred P. Spraul, A. F. Hilliard, O. D. Hare and E. A. Hanna.

Okmulgee, Okla.—Preston-Galligan Oil Co. incorporated with \$10,000 capital stock by Alex. Preston, J. O. Hamilton and William C. Newman.

Okmulgee, Okla.—Trio Oil & Gas Co. incorporated with \$5000 capital stock by I. B. Levy, W. A. Hlatt and J. Belford.

Tulsa, Okla.—Oklahoma Company incorporated with \$12,000 capital stock by J. L. Downing, T. P. Lee, Tulsa; J. S. Cullimore, Houston, Texas, and others; to construct pipe line in Oklahoma.

Wheeling, W. Va.—Stockyard Oil & Gas Co. incorporated with \$15,000 capital stock by A. F. Gasmire, H. F. Gasmire, T. M. Garvin, all of Wheeling, and others.

ICE AND COLD-STORAGE PLANTS

Houston, Texas.—Dissen & Schneider will establish cold-storage plant and produce warehouse; building has been secured, which will be enlarged and remodeled; structure will be 100x50 feet and have capacity for 15 cars; banana-room will be equipped with both hot and cold air.

Lancaster, S. C.—Lancaster Ice & Coal Co. organized by R. E. Wylie, T. M. Hughes, W. M. Moore and others.

St. Louis, Mo.—St. Louis Independent Packing Co. will, it is reported, expend \$250,000 to build cold-storage warehouse and 60 cattle pens; has purchased site 600x300 feet.

Temple, Texas.—Cudahy Packing Co., Omaha, Neb., contemplates establishing cold-storage plant at Temple. (See "Canning and Packing Plants.")

Titusville, Fla.—W. H. Ford and J. L. Van De Veer of Selma, Ala., have purchased, will remodel and operate Indian River Ice Factory; will also build plant of 25 tons capacity daily.

Valdosta, Ga.—Consolidated Ice & Fuel Co. incorporated with \$30,000 capital stock by W. T. Elder, L. H. Bessent and J. O. Bessent.

LUMBER-MANUFACTURING PLANTS

Arkadelphia, Ark.—Fort Smith-Gordon Land & Timber Co. incorporated with \$500,000 capital stock by T. H. Garrett, L. Sparkman, F. E. Sheldon and others.

Ashland, Ky.—Wright-Saulsberry Lumber Co. will probably rebuild band-saw mill reported destroyed by fire; loss about \$25,000.

Beattyville, Ky.—South Fork Lumber Co. incorporated with \$3000 capital stock by H. C. Dickerson, Felix Sternberg and F. A. Lyon, Jr.

Belhaven, N. C.—Belhaven Lumber & Man-

ufacturing Co. incorporated with \$100,000 capital stock by J. A. Wilkinson, William Schuette and A. C. Opperman.

Bilva, Ky.—Webb-Davis Lumber Co., La. Webb, manager, Bilva, Ky., will shortly begin cutting large tract of poplar timber on Bottom Fork creek, near Bilva.

Fort Worth, Texas.—Jones Lumber Co. incorporated with \$25,000 capital stock by R. M. Farrar, N. A. Hurt and J. B. Thomas.

Graham County, N. C.—Lutcher & Moore Lumber Co., Orange, Texas, has not purchased timber lands in Graham county, as recently incorrectly noted.

Hattiesburg, Miss.—Patrick Lumber & Tie Co. incorporated with \$25,000 capital stock by R. W. Patrick and others.

Lexington, Ky.—Southern Coal & Lumber Co. incorporated with \$1,000,000 capital stock by B. R. Hutchcraft, Lexington; A. Stanley Stanford, Philadelphia, Pa., and J. K. Carpenter, Gaffney, S. C.

Meadville, Miss.—Morgan Fork Lumber Co. incorporated with \$10,000 capital stock by D. F. Guice, Meadville; W. I. Mutson, S. E. Moore, Brookhaven, Miss., and others.

Mobile, Ala.—Smith-McGowin Mill Co. incorporated with capital stock of \$50,000; has acquired and will operate plants heretofore operated by Smith Bros. Lumber Co.; W. T. McGowin, Mobile, president; I. N. Boyd, vice-president, Montgomery, Ala.; E. L. McGowin, secretary-treasurer, Hattiesburg, Miss.

Nashville, Tenn.—J. G. Cunningham and others will form company with capital stock of \$100,000 to build saw and planing mills; have secured 400x700-foot site and will erect modern buildings; lumber shed to be 600 feet long.

Newport, Ark.—Schneider & Stegall Lumber Co. incorporated; P. P. Stegall, president; M. M. Stegall, vice-president; G. F. Schneider, secretary and treasurer.

Palmetto, La.—Dr. H. B. Wrenn, Collier-ville, Tenn.; Charles E. Gill, Wausau, Wis., and associates, recently noted to establish sawmill, have, it is reported, purchased 100,000 acres of hardwood timber land in St. Landry parish; will erect town at Palmetto and build double band-saw mill with capacity of 300,000 feet.

Pennington Gap, Va.—Spangler-Rhea Lumber Co. incorporated with \$25,000 capital stock; H. O. Spangler, Bluefield, W. Va., president; J. L. Rhea, secretary, treasurer and general manager, Pennington Gap.

Pickens, W. Va.—Croft Lumber Co., J. H. Henderson, president, Pittsburg, Pa., is considering development of timber land near Pickens; plans have not been completed.

Riverside, Texas.—Louisiana & Missouri Lumber Co., recently reported incorporated, has elected W. J. Chastin, Riverside, president; O. E. Renfro, Kansas City, Mo., vice-president; A. W. Byrne, Kansas City, treasurer; C. L. Simpson, secretary; will erect sawmill at Riverside.

St. Louis, Mo.—St. Louis Lumber Co., recently incorporated with \$1,000,000 capital stock, consolidates 25 retail lumber yards. John A. Rehels, Steven J. Gavin, Harry R. Schwartz and J. W. Putnam are the principal incorporators.

Valdosta, Ga.—Consolidated Ice & Fuel Co. incorporated by W. T. Elder and others. (See "Ice & Cold Storage Plants.")

MINING

Alabama.—Marble.—Alabama Marble Co. incorporated with \$3,000,000 capital stock by John Stephen Sewell, Gant's Quarry, Ala.; John Kerr Branch, Richmond, Va.; Henry Evans, New York, and others to quarry marble, stone and building material in Alabama.

Carthage, Mo.—Lead and Zinc.—Ravenswood Mining Co. incorporated with \$100,000 capital stock by Edward E. Gore, Charles A. Blair, F. B. Clark and others.

Cedartown, Ga.—Iron.—Woodstock Iron & Steel Corporation of Anniston, Ala., has leased North Georgia Ore Co.'s property near Cedartown and will develop. S. V. Richardson, superintendent, is in charge. J. M. Barr is president and treasurer, with offices at Norfolk, Va.

Fort Worth, Texas.—Fuller's Earth.—American Fuller's Earth Co. incorporated with \$30,000 capital stock by T. B. Yarbrough, D. R. Montgomery, C. H. Yoakum and others.

Gantt's Quarry, Ala.—Marble.—Alabama Marble Co. incorporated with capital stock of \$3,000,000 by John Stephen Sewell of Gantt's Quarry; Henry Evans, G. Trowbridge Hollister, George D. Mackay, Eugene Meyer, Jr., and Henry K. Pomeroy of New York, and John Kerr Branch of Richmond, Va.; company's telegraph office, Sylacauga, Ala.

Georgia.—Pyrites.—Georgia Pyrites Co. incorporated with \$25,000 capital stock by B. S.

Mantz, L. H. Gunther and J. R. Turner, all of Jersey City, N. J.

Jacksboro, Texas.—Stone.—Jacksboro Stone & Manufacturing Co. incorporated with \$100,000 capital stock by L. T. Richardson and Walter Isbell, Jacksboro, and J. W. Pinson, Dallas, Texas.

Joplin, Mo.—Lead and Zinc.—West Mining Co. incorporated with \$60,000 capital stock by H. E. West, Jamot Brown, G. E. Hayler, Jr., and others.

Joplin, Mo.—Zinc, etc.—A. & C. Mining Co. incorporated with capital stock of \$50,000 by J. C. Amerman, E. P. Sparrow and C. C. Colt.

Plant City, Fla.—Phosphate.—Coronet Phosphate Co. awarded contract to C. G. Memminger, Lakeland, Fla., for erection of plant for development of phosphate mines near Plant City.

Richmond, Va.—American Mining & Smelting Co. incorporated with \$100,000 capital stock by F. C. Klipper, president; Spencer Cornick, treasurer; W. P. Arwood, secretary.

Rutherfordton, N. C.—War Eagle Hydraulic Mining Co. incorporated with \$200,000 capital stock by Henry Briggs, T. C. Stone, E. M. Carpenter, all of Greenville, S. C., and others.

Salisbury, N. C.—Granite.—Balfour Pink Granite Co. incorporated with capital stock of \$60,000 by Wm. A. Esson, Edw. B. Trickle, Ernest McCall, George R. Collins and J. E. Ramsey.

Sulphur, La.—Sulphur.—Union Sulphur Co. will build 40x120-foot dredge for additional mining facilities.

MISCELLANEOUS CONSTRUCTION WORK

Angleton, Texas.—Drainage.—J. B. Arpen, Grand Rapids, Wis., is lowest bidder at 12.84 cents per cubic yard for work in Angleton Drainage District, comprising about 55,000 acres; contract calls for construction of 31 canals, drains and ditches from 4 to 12 feet wide at base, 4 to 5 feet deep; total excavation about 653,238 cubic yards of earth; \$120,000 of bonds have been voted; J. L. Chambers, engineer in charge. (Recently mentioned.)

Anniston, Ala.—Canal.—City will construct canal eight feet wide, six feet deep; rock walls.

Austin, Texas.—Dam.—City will vote about September 15 on issuance of bonds to rebuild granite dam across Colorado river near Austin. It is estimated that dam will cost \$300,000, and power-house, with machinery, about \$120,000; W. G. Kirkpatrick, Jackson, Miss., previously mentioned as engineer.

Baltimore, Md.—Piers.—Bids will be opened August 12 for construction of two pile and timber piers, known as Piers 7 and 8; O. F. Lackey, Harbor Engineer. (See "Machinery Wanted.")

Bay City, Texas.—Drainage.—Rio Grande Construction Co., Brownsville, Texas, has contract for drainage in Bay City district, involving expenditure of about \$150,000.

Charleston, S. C.—Torpedo-boat Station.—Pennsylvania Bridge Co., Washington, D. C., has contract at \$48,000 to construct torpedo-boat slips at Charleston Navy-yard; one pier will be 30x50 feet, and five piers each 10x460 feet; construction to be of creosoted pine timbers with creosoted wooden decks; docks will permit of mooring of 30 or more torpedo-boats alongside piers; railroad track will be laid, allowing machinery to be quickly taken from boats. Lieut. W. H. Allen, civil engineer, in charge of construction, has prepared plans.

Farmville, Va.—Heating Plant.—City and Prince Edward county are having plans and specifications prepared for steam-heating plant to heat courthouse, clerk's office, jail, opera-house and other county and municipal buildings. Address The Mayor or County Commissioners.

Front Royal, Va.—Dam.—Town will construct concrete dam on Shenandoah river, 260 feet long and 10 feet high; bids will be opened August 18; W. J. Kendrick, Recorder. (See "Machinery Wanted.")

Grenada, Miss.—Heating.—Bids are invited for installation of system of water heating in school building; B. F. Thomas, president School Trustees. (See "Machinery Wanted.")

Key West, Fla.—Quay Wall, etc.—Penn Bridge Co., Beaver Falls, Pa., is lowest bidder at \$253,439 for construction of steel and concrete quay wall and pier on timber piles, and steel and concrete coal shed. (Noted in June.)

Lake Charles, La.—Wharves.—Lake Charles Railway & Navigation Co. proposes to build wharves and otherwise promote shipping facilities; W. P. Weber, president.

Norfolk, Va.—Steel Pier.—Virginian Railway, H. Fernstrom, chief engineer, is about to begin erection of steel superstructure for coal pier in course of construction at Sewell's Point; substructure by McLean Contracting Co., 902 Maryland Trust Building, Baltimore, Md.; superstructure by McClintic-Marshall Construction Co. of Pittsburgh, Pa.

Petersburg, Va.—Dredging.—Government awarded contract to Atlantic Dredging Co., Philadelphia, Pa., at \$32,900, to dredge Appomattox river; work includes removal of eight shoals and dredging of 80-foot-channel, 12 feet deep, from Point of Rocks, 7½ miles from Petersburg, to dam for diversion of river, now being built under appropriation of \$200,000; earth removed by dredge will be used for latter work. (Mentioned in May.)

Roanoke, Va.—Heating.—Roanoke Traction & Light Co. incorporated with authorized capital stock of \$2,000,000; has charter privilege to operate heating plants in Roanoke, Lynchburg and Clifton Forge, Va.; James P. Woods, president. (See "Electric Light and Power Plants.")

Washington, D. C.—Heating Plant.—Freedman's Hospital will enlarge and extend heating plant so as to supply heat to all buildings of Howard University. George H. Safford, secretary-treasurer. Interior Department, Frank Pierce, acting Secretary, will advertise plans and specifications at once, calling for expenditure of about \$15,000. (See "Machinery Wanted.")

MISCELLANEOUS ENTERPRISES

Asheville, N. C.—Suburban Development.—Dr. E. W. Grove will, it is reported, expend about \$40,000 in developing 19 acres of land, having frontage of 700 feet, as residential suburb; improvements will include drives, walks, parks, etc.

Cotton Plant, Ark.—Land Improvement.—Cotton Plant Realty Co. incorporated with \$25,000 capital stock by F. H. Kennedy, D. H. Echols, Frank Andrews and others.

Craigsville, Va.—Land Improvement.—Craigsville Development Co. incorporated with \$20,000 capital stock; E. S. Ryan, president; H. S. Shuey, secretary and treasurer.

Greensboro, N. C.—Timber Lands.—Consolidated Realty Co. incorporated by J. A. Davidson, O. B. Barnes and W. H. Matthews.

Hamilton, Va.—Orchard.—High Point Orchard Co. incorporated with \$25,000 capital stock; J. M. Hoge, president; L. C. Hoge, vice-president; R. N. Hoge, treasurer, all of Leesburg, Va.

Hattiesburg, Miss.—Bookbinding.—Martin Printing Co. to establish bookbinding; contracts reported as awarded.

Hattiesburg, Miss.—Printing Plant.—The Hattiesburg News incorporated with capital stock of \$30,000 to acquire and continue Hattiesburg Printing & Publishing Co.; will enlarge plant; Edgar G. Harris, T. H. Gordon, A. B. Hobbs and others, incorporators.

Johnson City, Tenn.—Steam Laundry.—Johnson City Steam Laundry will erect building, to which its machinery will be moved; structure to be 60x100 feet, of fire-proof construction, costing \$10,000.

Kansas City, Mo.—Marble, etc.—Missouri Marble, Mosaic & Terazzo Co. incorporated by Frank Pais, Eugene Sande, Stefano De Felippo and others.

Memphis, Tenn.—Resort.—Louis Fritz and associates will, it is reported, establish summer resort at Horn Lake; improvements will include hotel, bathing and boating pavilions and park; expenditure about \$100,000.

Nashville, Tenn.—Land Improvement.—Westerleigh Heights Realty Co. incorporated with \$50,000 capital stock by Jno. T. Landis, J. Roy Boone, Thos. J. Tyne and others.

Nashville, Tenn.—Decorating.—Southern Decorative Co. incorporated with \$10,000 capital stock by W. P. Stewart, W. G. Garner, A. G. Langham and others.

Nashville, Tenn.—Grain Elevator.—Kendrick-Roam Grain Co. changed name to Kendrick-Roam Grain & Elevator Co. and increased capital stock from \$20,000 to \$75,000.

New Orleans, La.—Poultry, etc.—Southern Poultry & Hog Co. incorporated with capital stock of \$100,000 to propagate poultry, etc.; D. James Theard, president; Laurence B. Thompson, secretary-treasurer.

Norfolk, Va.—Dredging.—L. M. Lewis Dredging Co. incorporated with capital stock of \$50,000; L. W. Lewis, president; G. L. Glenn, secretary-treasurer.

Oklahoma City, Okla.—Wylie & Co. incorporated with \$20,000 capital stock by W. S. Wylie, W. N. Wetherbee and Grinnell Moore.

Paducah, Ky.—Henry Clay Company incorporated with \$45,000 capital stock by R. B. Winston, W. F. Bradshaw of Paducah and W. M. Morgan of Mayfield, Ky.

Pensacola, Fla.—Supplies.—Pensacola Fuel & Builders' Supply Co. incorporated with \$3000 capital stock; Lee Daniell, president; E. G. Sewell, vice-president and secretary; E. L. Reese, treasurer.

Port Arthur, Texas.—Towing.—Frederichsen Towing Co. incorporated with \$7500 capital stock by H. M. Frederichsen, W. M. Reynolds and F. W. Chambers.

Quanah, Texas.—Steam Laundry.—M. R. Lott of the Navasota Steam Laundry, Navasota, Texas, will establish branch plant at Quanah.

Richmond, Va.—Steam Laundry.—Crystal Laundry incorporated with capital stock of \$10,000; M. D. Burton, president; J. E. Gates, secretary-treasurer.

Richmond, Va.—Printing.—Daily Record Co. incorporated with \$10,000 capital stock; W. H. Mercer, president; Walter C. Mercer, secretary and treasurer.

Richmond, Va.—Poultry.—Southern Poultry Co. incorporated with \$50,000 capital stock; Joseph Lee Davis, president; H. C. Robelan, vice-president; Fred J. C. Wybrew, secretary, treasurer and office manager; has acquired about 200 acres, and will erect 35 buildings for poultry raising, including roosting-houses, sheds, incubator cellars, brooder-houses, storerooms, boiler sheds, where various egg-producing foods will be mixed and cooked; cost about \$5000; bone-cutters, gasoline engines and all kinds of poultry-plant machinery will be installed; capacity, 1000 eggs and 100 fowls. J. O. Allwood will be manager.

Roanoke, Va.—Amusements.—Aerial Amusement Co. incorporated; W. C. Lawson, president; J. W. Iyerly, vice-president; M. M. Caldwell, secretary and treasurer.

Salisbury, N. C.—Hardware.—Arey Hardware Co. incorporated with \$50,000 capital stock by Charles W. F. and E. B. Arey.

St. Louis, Mo.—Printing.—Trade Press Co. incorporated with \$25,000 capital stock by Frank W. Chosel, Lon Sanders and F. H. Littlefield.

St. Louis, Mo.—Decorating.—Krazer Decorating Co. incorporated with capital stock of \$15,000 by Chas. F. Krazer and associates.

Washington, D. C.—Printing.—Review & Herald Publishing Co., Takoma Park (suburb) awarded contract to A. S. Baird, 554 Columbia road N. W., Washington, for erection of printing plant at 96 Willow avenue; cost \$11,000.

Wilmington, N. C.—Automobiles.—The Auto Company incorporated with capital stock of \$10,000 by A. B. Skelding, Geo. B. Elliott, C. E. Taylor, Jr., and others.

MISCELLANEOUS MANUFACTURING PLANTS

Baltimore, Md.—Beer.—Conrad Eurich, Brooklyn, N. Y., has purchased Mt. Vernon Brewing Co.'s brewery and incorporated Eurich's Mt. Vernon Brewery to operate it; capital stock \$100,000; Conrad Eurich, president and treasurer; Henry R. Borman, manager.

Bunkie, La.—Sugar.—G. W. Sentell has purchased (from Whitney Iron Works Co., New Orleans, La.) and will install at his Leinster factory one five-foot mill, provided with all recent improvements; set of cast-iron gearing for the six-roll mill, complete with shafts, gear wheels, bed plates, etc.

Fort Worth, Texas.—Transmitters.—Transmitter Company incorporated with \$10,000 capital stock by Aaron Smith, Fort Worth; John C. Casler, Dallas, Texas; J. B. Earle, Waco, Texas.

Girard, Ga.—Chemicals.—Chattahoochee Chemical & Mining Co., T. C. S. Howard, president, will rebuild plant recently reported destroyed by fire; loss \$10,000.

Gulfport, Miss.—Coffee Mills.—Gulfport Coffee Co. has perfected organization with J. F. Galloway president, W. H. Foote vice-president and treasurer, H. L. Mosgrove secretary, A. L. Whetstone general manager. (Previously mentioned.)

Guthrie, Ky.—Snuff.—Planters' Protective Association, F. G. Ewing, general manager, proposes organization of \$50,000 stock company to build snuff factory.

Huntington, W. Va.—Creamery.—Huntington Pure Milk & Ice Cream Co. incorporated with capital stock of \$50,000 by C. H. Snider and others.

Isabella, Tenn.—Sulphuric Acid.—Ducktown Sulphur, Copper & Iron Co. is progressing with construction of its proposed \$500,000 plant for manufacturing sulphuric acid from copper-refinery fumes; capacity to be 400 tons daily.

Jacksonville, Fla.—Syrup.—C. B. Gay Company incorporated with \$50,000 capital stock; C. B. Gay, president; George H. White, vice-president; J. R. Werner, secretary and treasurer;

will erect building on site, 117x330 feet; reinforced concrete to point eight feet above ground level, surmounted by single-story frame structure; will have cellar and subcellar; concrete tank sunk four feet below ground floor will be built; gravity process of refining will be used; later charcoal clarifying process will be installed.

Lebanon, Tenn.—Brooms.—Cedar City Milling Co. will establish broom factory. James Brown will be manager.

Lexington, Ky.—Distillery.—James E. Pepper Distilling Co. incorporated with \$2,000,000 capital stock by L. E. Wolf, G. L. Simons, H. M. Simons and others, all of Chicago, Ill.

Little Rock, Ark.—Mattresses.—Jop-Pa Mattress Co. incorporated; S. J. Beauchamp, president; B. P. Kidd, vice-president; W. R. Tucker, secretary; J. R. Vinson, treasurer; have purchased plant of Beauchamp-Polk Company.

Little Rock, Ark.—Automobile Wheels.—Company has been organized by Fred Newton Gibb to manufacture spring wheels for automobiles.

Lynchburg, Va.—Tinware.—Diuguid-Noel Metalware Co. incorporated with \$10,000 capital stock; Meem Diuguid, president and treasurer; E. M. Noel, vice-president and general manager; K. D. Urquhart, secretary.

Lynchburg, Va.—Gloves.—Lynchburg Glove & Mittens Co. incorporated with capital stock of \$25,000; Solomon Sachs, president; W. L. Moorman, secretary-treasurer.

Lynchburg, Va.—Shirts and Overalls.—N. & W. Manufacturing Co. incorporated with capital stock of \$35,000; Isador Sachs, president; W. L. Moorman, secretary-treasurer.

Montgomery, Ala.—Jewelry.—Sherwood Bartlett Jewelry Co. incorporated with capital stock of \$25,000 by J. E. Bartlett, J. H. Sherwood and W. A. Jordan.

Moribhan, La.—Sugar.—New Iberia Sugar Co. awarded contract to Birmingham (Ala.) Machine & Foundry Co. for additional machinery for sugar mill, including 26x78-inch cane crusher.

New Orleans, La.—Gas.—New Orleans Gas Light Co., recently noted to erect foundation for gas holder, awarded contract to Stacey Manufacturing Co., Cincinnati, Ohio, for construction of four-lift 1,020,000-cubic-foot-capacity gas holder and tank for storing gas; cost, including foundation, complete, \$125,000; Joseph H. DeGrange, secretary.

Norfolk, Va.—Lime.—Andrews & Co. will establish lime-mixing plant.

Norfolk, Va.—Limekilns and Shed.—George H. Frey will erect two limekilns and storage shed, latter to be 100x50 feet.

Norfolk, Va.—Whiskey.—Southern Distilling Co. incorporated with capital stock of \$50,000; W. E. Porch, president; F. W. Calvert, vice-president; W. R. Murphy, Jr., secretary-treasurer.

Paducah, Ky.—Sterilizer.—Lucas Sterilizing Manufacturing Co. incorporated; E. G. Stamper, president; J. T. Gilbert, vice-president; F. A. Lucas, secretary; F. M. McGlathery, treasurer; to manufacture combined sterilizer and water heater for dentists.

Savannah, Ga.—Flavoring Extracts, Beverages, etc.—Savannah Extract & Beverage Co. incorporated by William H. Finn and David Tod; capital stock \$6000.

Staunton, Va.—Creamery.—H. L. Wilson and R. K. Koerner will organize company to establish creamery.

St. Louis, Mo.—Clothing.—Arkwright Realty Co. (management of Mississippi Valley Trust Co.) will erect factory building to be occupied by Ferguson-McKinney Dry Goods Co. as clothing manufactory; five stories; cost \$150,000.

St. Louis, Mo.—Food Products.—J. Herman Manufacturing Co. incorporated with \$15,000 capital stock by Gustave Michaels, Adolph Michaels and Charles Spiegelthal.

St. Louis, Mo.—Perfection Manufacturing Co. incorporated with \$50,000 capital stock by J. A. Eberle, A. E. Meyer, Joseph Poupeney and others.

Tampa, Fla.—Cigars.—V. Guerra, Diaz & Co. are having plans prepared by Miller & Kennard for cigar factory; two stories; brick; 33x65 feet; approximate cost \$7000.

Temple, Texas.—Brooms.—W. H. Hill, Bartlett, Texas, will establish broom factory in Temple.

Temple, Texas.—Gas.—J. R. Dawson of Boston, Mass., contemplates purchase and reconstruction of Temple Gas Co.'s plant, damaged by explosion some time ago.

Victoria, Texas.—Gas.—Locke & Rogers of Mexico, Mo., will, it is reported, build gas-lighting plant to cost \$75,000.

Winchester, Ky.—Winchester Overall Co.

will, it is reported, increase capital stock and capacity.

Weatherford, Texas.—Mirrors.—Portable Mirror Co. incorporated with capital stock of \$10,000 by R. J. Birdwell, G. M. Bowie and R. S. Lowe.

Whaleyville, Va.—Gas.—F. R. Ellenor is interested in plan to establish plant to supply gas for lighting and cooking. (See "Machinery Wanted.")

Wytheville, Va.—Broom Factory.—R. P. Johnson will establish broom factory. (See "Machinery Wanted.")

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Strasburg, Va.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., will not erect roundhouse and machine shop at Strasburg recently reported.

Texarkana, Texas.—Texarkana & Fort Smith Railway (branch of Kansas City Southern Railway) will erect roundhouse; mill construction; cost \$2900; to replace structure recently reported burned; I. H. Luke is superintendent; H. De W. Smith, engineer in charge, both of Texarkana; A. F. Rust, 207 Thayer Building, Kansas City, Mo., is consulting engineer.

Washington, D. C.—Commissioners District of Columbia (Henry B. F. Macfarland, Henry L. West and Jay J. Morrow) appointed D. H. Burnham & Co., Chicago, Ill., architects of Union Station, to prepare plans for improvement of terminal plaza. Congress appropriated \$100,000 and Washington Terminal Co. will expend \$50,000 additional.

ROAD AND STREET IMPROVEMENTS

Baltimore, Md.—City will grade, curb, gutter and pave with bitulithic, sheet asphalt, asphalt blocks or vitrified brick 7th and 8th streets and Clifton and Walbrook avenues; bids will be opened August 12; James H. Smith, president Commissioners for Opening Streets, City Hall Annex (Hoen Building). (See "Machinery Wanted.")

Basic City, Va.—City has voted \$25,000 of bonds for paving, sewer and water-works construction; W. H. Page, Mayor. (Recently mentioned.)

Charlotte Court House, Va.—Charlotte county will vote on issuance of \$100,000 of bonds for road construction. Address County Commissioners.

Chattanooga, Tenn.—City will lay cement sidewalks and curbing around First District School on McCallie avenue, Douglas and Oak streets; also cement sidewalks on Boyce and Market streets; bids will be opened August 7; H. P. Van Dusen, chairman Board of Public Works. (See "Machinery Wanted.")

Charlotte, N. C.—City's street-improvement work, recently mentioned, for which \$40,000 is available, will be continuation of present contract for street paving awarded to Atlantic Bitulithic Co., Mutual Building, Richmond, Va.; H. Franklin, Mayor.

Columbia, Tenn.—Bids are invited for building one mile of concrete pavement five feet wide from corporation line to Columbia Military Academy; Mrs. J. C. Hardy, chairman West End sidewalk committee. (See "Machinery Wanted.")

Fort Barrancas, Fla.—Contract will be awarded August 24 for construction and repair of macadam wagon roads; D. W. Hand, Constructing Quartermaster. (See "Machinery Wanted.")

Lynchburg, Va.—City awarded contract to A. J. Miller & Son of Lynchburg for excavating, grading and laying about 1500 square yards of concrete sidewalks at \$1.06 for concrete work and 30 cents for excavating.

Madison, N. C.—City awarded contract to C. M. Thomas & Co., Winston-Salem, N. C., for laying about 5000 yards of concrete sidewalk, and to Ordway & Sons, Winston-Salem, N. C., for paving streets and laying curbing; about \$15,000 will be expended. (Recently mentioned.)

Memphis, Tenn.—Following contracts for street paving have been awarded: Florida street, M. Larkin, \$27,350; Linden avenue, Roach & Manigan, \$2256; Illinois avenue, Roach & Manigan, \$4033; Polk avenue, Roach & Manigan, \$396; Central avenue, Roach & Manigan, \$4409; College street, Roach & Manigan, \$1688; Vinton avenue, Roach & Manigan, \$1450; all of Memphis.

Memphis, Tenn.—W. F. Gill, Superintendent Shelby County Roads, has awarded contracts for road improvements in four remaining districts, as follows: Sixth District, 59 miles, to T. P. Walker; \$478 for grading, \$75 repairs and \$37 per 1000 feet for culverts.

Seventh District, 39 miles, C. G. Gowan; \$550 grading, \$60 repairing and \$37.50 for culverts. Third District, 27 miles, Williams & Cooke; \$498 grading, \$75 repairs and \$36 culverts. Tenth District, 49 miles, J. W. Prescott; \$432 grading, \$72.50 repairs and \$37 for culverts; all of Memphis. Mr. Gill will supervise work. (Recently mentioned.)

Mobile, Ala.—Contract for street improvements, recently mentioned, calls for laying 35,000 feet of sewer pipe from 6 to 36 inches, 24 standard manholes, 51 standard inlets, 26 special catch-basins, about 400 feet of 3x2 concrete culvert, 37,500 square yards of wood block pavement, about 3000 square yards vitrified brick pavement, about 6000 feet of granite curbing and about 12,000 feet cement curbing. B. B. Boone, City Attorney, has recommended that Jett Bros. Contracting Co. of Mobile be awarded contract; Stewart Brooks, president Board of Public Works.

Norfolk, Va.—Norfolk & Suburban Turnpike Co., Arthur W. Dupue, president, will improve three roads with crushed rock.

Portsmouth, Va.—Norfolk County Circuit Court, William N. Portlock, Judge, has appointed Alvah H. Martin, M. G. Long and George W. Brown as road commissioners to have charge of expenditure of \$200,000 bond issue authorized by the last State Legislature for road improvements.

Richmond, Va.—State of Virginia has appropriated \$250,000 for proposed improvement of county roads; P. St. J. Wilson, State Highway Commissioner.

San Antonio, Texas.—City has accepted new specifications by Mr. Giraud, City Engineer, for paving Houston street, and will open bids August 20; proposals will be received on both vitrified brick and asphalt; city will furnish material for foundation; C. C. Gibbs, chairman of committee. (Recently mentioned.)

St. Petersburg, Fla.—City has voted \$5000 of bonds for street improvements. Address The Mayor.

Van Buren, Ark.—City will award contract August 10 to grade and pave Main street, parts of East Main street, Cane Hill street and Fayetteville street with brick; work will consist of about 10,000 square yards of double brick pavement upon sand foundation; 4218 cubic yards of excavation; 1½ linear feet of cement curbing, 420 linear feet cement curb and gutter and 420 linear feet castings for street crossings; E. L. Matlock, secretary Board of Paving Commissioners. T. A. Bayley, Fort Smith, Ark., is engineer. (See "Machinery Wanted.")

Wheeling, W. Va.—Wheeling Traction Co. awarded contract to Dixon & Pickett of Wheeling for paving Main-street hill; contract for material awarded.

Wheeling, W. Va.—City will return unopened all bids for concrete paving of Caldwell's run; Mr. Cooke, City Engineer. (Recently mentioned.)

Wytheville, Va.—City will vote August 15 on issuance of \$10,000 of bonds for street improvements. Address The Mayor.

SEWER CONSTRUCTION

Algiers, Station New Orleans, La.—City awarded contract to D'Oiler Engineering Co., 121 South 11th street, Philadelphia, Pa., for electrical and pumping machinery to be installed in Sewerage Station "C" at \$22,004. Contract for 1,000,000-gallon triplex pump and motor and two five-horse-power motors is not included; A. B. Wood, 604 Carondelet street, New Orleans, La., designing engineer. (Noted in April.)

Basic City, Va.—City has voted \$25,000 of bonds for sewer, water-works and paving; W. H. Page, Mayor. (Recently mentioned.)

Clarendon, Ark.—City is considering construction of sewer and water system, expending about \$45,000. Address The Mayor.

Denton, Texas.—City proposes to lay about eight miles of mains and build septic tank in connection with sewerage system recently mentioned to be constructed at cost of about \$24,000; bonds will probably be issued; Edward F. Bates, Mayor.

Graymont, P. O. Birmingham, Ala.—City voted \$10,000 of bonds for sanitary sewer construction; W. A. Lester, Mayor.

Houston, Texas.—H. H. Yorty & Co. of Houston are lowest bidders for construction of sewer; to be of brick with vitrified invert, concrete or reinforced concrete, area same as 11-foot circular sewer; 1300 feet long; estimated cost \$40,000; bid is \$32 per linear foot for brick, \$26.25 for reinforced concrete and \$29 for concrete. (Recently mentioned.)

Lenoir, N. C.—J. B. McCrary & Co., Atlanta, Ga., will supervise construction of sewer and water-works system, recently mentioned; \$80,000 of bonds have been voted.

McAlester, Okla.—City Council has rescinded action calling for election on August 4 to vote on issuance of \$156,000 of bonds for sewer construction; G. M. Chany, Mayor. (Recently mentioned.)

Mobile, Ala.—Fifth-street paving venture includes laying of 36,000 feet of sewer pipe from 6 to 36 inches, 24 standard manholes, 54 standard inlets, 26 special catch-basins, etc.; Stewart Brooks, president Board of Awards. (See "Road and Street Improvements.")

Newport, Ark.—Board of Improvement Sewer District No. 1 has been appointed to promote construction of sewer system mentioned in June; architect has not been engaged; A. Ferguson, chairman; I. Goldman, secretary. Address Mr. Ferguson for further information.

Portsmouth, Va.—Sewerage committee will recommend that Bryan & Co., Jacksonville, Fla., be awarded contract at \$68,183.04 for constructing sewer system in Fifth ward; Hascom Sykes, City Engineer; A. August Bilisoly and William Jones Williams, chairman sewerage committee. (Recently mentioned.)

San Antonio, Texas.—City has voted \$45,000 of bonds for sewer construction in Improvement District No. 7, Prospect Park. Address The Mayor.

Stuttgart, Ark.—City is considering construction of sanitary-sewer system. Address The Mayor.

Sulphur Springs, Texas.—City will construct sewer system; Leon Dalton, Dallas, Texas, will be engineer in charge.

Washington, D. C.—Contract will be awarded August 17 for constructing pipe sewers in District of Columbia; Henry B. F. Macfarland, Henry L. West and Jay J. Morrow, Commissioners. (See "Machinery Wanted.")

TELEPHONE SYSTEMS

Bethania, N. C.—Rural Telephone Co. incorporated with capital stock of \$24,000 by H. A. Peddyard and Geo. H. Hauser of Bethania and W. B. Little of Winston-Salem, N. C.

Lexington, Ky.—Fayette Home Telephone Co., George S. Shanklin, president, will erect building; two stories; fireproof; cost \$15,000; M. S. Taylor, engineer in charge. (Recently mentioned.)

Mud, Texas.—J. T. Maxey proposes construction of telephone lines to Austin, 25 miles distant.

TEXTILE MILLS

Ardmore, Okla.—Cotton.—Commercial Club is reported as having closed contract for location of cotton mill by New England capitalists.

Augusta, Ga.—Cotton.—Frank E. Baldwin, Journal Building, Boston, Mass., lately mentioned, represents capitalists who contemplate building five or six cotton mills in the South; Augusta and vicinity now being investigated as location for plant.

Gaffney, S. C.—Cotton Goods.—Gaffney Manufacturing Co. is moving machinery from old mill building to old finishing mill building in order to rearrange to better advantage. When conditions justify, company expects to add 12,000 to 15,000 spindles.

Hampton, Ga.—Yarns.—Hampton Cotton Mills will increase capital stock from \$100,000 to \$150,000 and enlarge plant; will build by day labor addition to present building, to be 75x250 feet, and install 4000 spindles, with accompanying carding, picking and winding machinery; steam power used, but present power plant is sufficient for enlargement. Contract has been awarded for new machinery; present equipment 6000 spindles, etc. John Hill, Atlanta, Ga., is engineer in charge.

Kinston, N. C.—Hosiery.—Orion Knitting Mills, lately noted, has increased capital stock from \$50,000 to \$100,000; is installing some machinery to replace worn-out equipment.

Malvern, Ark.—Woolen Goods.—J. A. McMahon of the Nashville Woolen Mills, Nashville, Ark., will, it is reported, establish woolen mill at Malvern.

Mt. Holly, N. C.—Cotton Goods.—Albion Cotton Mills Co. incorporated with capital stock of \$100,000 by A. P. Rhyne, H. A. Rhyne and E. R. Cannon.

Mt. Holly, N. C.—Cotton Goods.—Mt. Holly Cotton Mills incorporated with capital stock of \$100,000 by H. A. Rhyne, E. R. Cannon and A. P. Rhyne.

Zebulon, N. C.—Yarns and Sheetings.—Archibald Meldrum and others propose to organize company with capital stock of \$100,000 to build next year mill for spinning hosiery yarns and possibly weaving sheetings.

Winnfield, La.—Cotton Goods.—Winnfield Progressive League is negotiating for location of proposed cotton mill.

WATER-WORKS

Ashburn, Ga.—City will construct water-works and electric-light plant; bids will be opened August 12; J. B. McCrary & Co., Atlanta, Ga., are engineers; John J. Story, City Clerk. (See "Machinery Wanted.")

Basic City, Va.—City has voted \$25,000 of bonds for paving, water-works and sewer construction; W. H. Page, Mayor. (Recently mentioned.)

Brunner, P. O. Houston, Texas.—Brunner Water & Light Co., which has franchise from Harris County Commissioners to furnish water and light, will lay two miles of water mains, construct water tower and reservoir, drill three artesian wells, etc.

Charlotte, N. C.—City will extend water mains to Elizabeth Heights, distance of about 5000 feet, at cost of \$4000; eight-inch piping will be used; H. Franklin, Mayor.

Clarendon, Ark.—City contemplates installing water and sewer system, expending about \$45,000; artesian water will be supplied. Address The Mayor.

Clarksdale, Miss.—City will award contract August 24 for constructing 250,000-gallon reservoir; reinforced concrete; connected to four-valve or Corliss engine; Walter G. Kirkpatrick, Jackson, Miss., is engineer. (See "Machinery Wanted.")

Clinton, Okla.—City has voted \$20,000 of bonds for extension of water-works; J. N. Thrash, Mayor; J. L. O'Hearn, City Engineer. (City recently mentioned to drill well.)

Daytona, Fla.—City will vote August 24 on issuance of \$50,000 of bonds for construction of water-works. Address The Mayor. (Recently mentioned.)

DeFuniak Springs, Fla.—City will open bids August 14 for construction of proposed water-works; to include elevated tank with maximum head of 135 feet, 75,000 gallons capacity; duplex steam pump, 500 gallons per minute capacity; 60-horse-power boiler, three miles of mains (4 to 10 inches in diameter), etc.; Solomon Norcross Company, engineer, 1622 Candler Building, Atlanta, Ga.; William W. Flournoy, Mayor. (City recently mentioned to erect tower, etc. See "Machinery Wanted.")

Florida, Ala.—City voted \$10,000 of bonds for water-works improvement. Address The Mayor.

Fort Barrancas, Fla.—Contract will be awarded August 23 for construction of steel trestle and water tank, or for moving and rebuilding old trestle and constructing new tank; D. W. Hand, Constructing Quartermaster. (See "Machinery Wanted.")

Greenville, Ala.—City will vote August 24 on issuance of \$23,600 of bonds to purchase water-works. Address The Mayor.

Greenville, Texas.—City has voted \$35,000 of bonds to purchase water-works system. Address The Mayor.

Houston, Texas.—A. M. Lockett & Co., New Orleans, La., are lowest bidders at \$28,583, \$45,965, \$35,214 and \$68,730 for 15,000,000-gallon pumping engine at water plant, and Layne & Bowler Company of Houston is lowest bidder for drilling two eight-inch artesian wells, one 1200 feet deep and other 1300 feet deep, at \$2.00 per linear foot, \$2.50 for every gallon produced daily per minute in excess of 347 gallons per minute.

Lenoir, N. C.—J. B. McCrary & Co., Atlanta, Ga., will supervise construction of water-works and sewerage system, for which \$80,000 of bonds have been voted. (Recently mentioned.)

Mt. Sterling, Ky.—Mt. Sterling Water, Light & Ice Co. has increased capital stock from \$250,000 to \$280,000.

Pascagoula, Miss.—City will construct water-works at seashore; artesian well has been purchased. Address The Mayor.

Russellville, Ala.—City will open bids September 1 for construction of water-works and electric-light plant, for which \$24,000 of bonds were recently reported voted. Prof. Edgar B. Kay, Tuscaloosa, Ala., is engineer in charge.

St. Petersburg, Fla.—City has voted \$7000 of bonds to purchase steam pump for water-works. Address The Mayor. (Recently mentioned.)

Wheeling, W. Va.—Pure Spring Water Co. incorporated with \$50,000 capital stock by A. S. Beil, E. L. Perkins, W. H. Curtis and others.

WOODWORKING PLANTS

Anniston, Ala.—Ladders, Swings, etc.—Lehman Manufacturing Co. will increase capacity of plant, adding manufacture of metal

and zinc washboards, screen doors and blinds.

Beaumont, Texas.—Pennington & Adams will erect shingle mill.

Carthage, N. C.—Water Buckets.—James Zeigler contemplates establishment of plant to manufacture well and water buckets; machinery not yet purchased. (See "Machinery Wanted.")

Columbus, Miss.—Veneer Plant.—Interstate Lumber Co. will expend about \$30,000 in erecting additional building and establishment of veneer plant.

Gadsden, Ala.—Barrels.—Attalla Cooperage Co., Attalla, Ala., will establish cooperage plant at Gadsden; mill construction; capacity 10,000 sets heading; cost \$3000; cost of machinery \$5000. (Lately mentioned.)

Kenbridge, Va.—Buggies.—G. G. Dodge will erect building and install machinery for manufacturing buggies; will buy wheels, axles, spokes, bodies, tops, etc. (See "Machinery Wanted.")

Louisville, Ky.—Staves.—Kentucky Stave Co. has increased capital stock from \$100,000 to \$300,000.

Petersburg, Va.—F. J. Kress Box Co., recently reported incorporated, will erect plant; corrugated iron and wood; two stories; 80x110 feet; F. J. Kress, president, Pittsburg, Pa.

St. Louis, Mo.—Wood Products.—Wonder Wood Corporation incorporated with \$10,000 capital stock by Wm. Williamson, B. S. Gilmer and Edwin T. Berry.

BURNED

Ashland, Ky.—Wright-Saulsberry Lumber Co.'s band-saw mill; estimated loss \$25,000.

Bobbin, Texas.—Aaron Smyth's cotton gin. Charleston, W. Va.—Blessing Bros.' planing mill; loss \$20,000.

Cleburne, Texas.—Ford-Osborn Lumber Co.'s plant damaged; loss \$18,000.

Dallas, Texas.—D. E. Waggoner's building; loss \$6000.

Delight, Ark.—Delight Lumber Co.'s plant; loss \$8000.

Durham, N. C.—John Malone's machine shop and planing mill; loss \$4000.

Elizabeth City, N. C.—Charles Creek Lumber Co.'s sawmill.

Lawrenceburg, Tenn.—Chambers & Co.'s livery barn; estimated loss \$6000.

Norfolk, Va.—Building occupied by Adams Express Co., Hampton Roads Paper Co., Virginia-Carolina Chemical Co. and others.

Norfolk, Va.—Norfolk Commission Co.'s buildings on dock; loss \$20,000 to \$40,000.

Shryock, W. Va.—J. C. Morehead Lumber Co.'s sawmill; loss about \$30,000.

Towson, Md.—About 20 bridges destroyed by storm; loss, including road damage, about \$40,000; Henry G. Shirley, roads engineer.

Waurika, Okla.—The Waurika Hotel; loss \$5000.

BUILDING NOTES

APARTMENT-HOUSES

Birmingham, Ala.—Thaddeus Mullins will erect apartment-house; two stories; brick; ordinary construction; furnace heat; gas and electricity; cost \$8000; to be built by day labor. (Lately noted.)

Chattanooga, Tenn.—C. W. Rankin, Temple Court, is receiving bids through Bearden & Foreman, architects, Chamberlain Building, Chattanooga, for apartment-house; two stories; brick; composition roof; four apartments of four rooms each; gas and electricity for lighting; bathtubs, lavatories, etc., in each apartment; cost \$7500.

Washington, D. C.—Henrietta J. Schlerf, 919 P street N. W., awarded contract to John W. Swainson, 804 E street N. W., Washington, for remodeling brick building at 917 P street N. W. as apartment dwelling; one apartment of five rooms and bath on each floor, each having private cellar and separate hot-water heating plant; front of red hydraulic press brick; stone trimmings; cost \$6500; plans by Joseph Bohn, Jr., 215 D street N. W., Washington.

BANK AND OFFICE BUILDINGS

Alta Vista, Va.—Lane Bros. awarded contract to Jones & Adams, Lynchburg, Va., to erect bank and office building; two stories; brick; terra-cotta and stone trimmings; cost \$15,000.

Baltimore, Md.—Baltimore Mutual Fire Insurance Co. awarded contract to McLaughlin Bros., 100 East Lexington street, Baltimore, for erection of building at 616 North

Calvert street; estimated cost \$15,000; plans by Haskell & Barnes, 301 North Charles street, Baltimore. (Recently mentioned.)

Calvert, Texas.—Calvert State Bank awarded contract to G. W. Sonfield, Dallas, Texas, to erect bank building.

Charleston, S. C.—Sidney S. Riggs is having plans prepared by J. D. Newcomer of Charleston for improvements to two-story building at 11 Broad street; height will be increased to four stories; 36 offices and room for banking purposes; exterior to be finished in Vermont brownstone; colonnade in front on lower floor; banking-room to have window and double door of plate glass; 500-volt electric elevator; electric lighting; steam heat; ventilating system.

Charleston, W. Va.—National City Bank has not decided on plans for bank and office building recently mentioned; construction work will begin next spring.

El Reno, Okla.—Chicago, Rock Island & Pacific Railway, J. B. Berry, chief engineer, Chicago, Ill., contemplates, it is reported, erecting five-story office building and enlarging passenger station at El Reno.

Fayetteville, N. C.—Southern Life Insurance Co. will erect office building.

Granger, Texas.—Farmers' State Bank will open bids on August 10 for erection of bank building; two stories, 30x60 feet; brick; plans and specifications on file with Pruitt Hardware Co. at Granger and with Henry Struve, Taylor, Texas.

Oklahoma City, Okla.—Byron Shear contemplates erecting office building; five stories; 25x140 feet; cost about \$25,000.

Pensacola, Fla.—American National Bank, C. W. Lamar, president, awarded contract to Selden-Breck Construction Co., St. Louis, Mo., to erect bank and office building recently mentioned; 10 stories, 92x61 feet; brick and terra-cotta; fireproof; 150 offices in addition to offices for bank on first and mezzanine floors; steam heat; gas and electric lighting; electric elevators; estimated cost \$200,000; plans by Carpenter & Blair, 475 Fifth avenue, New York.

Powderly, Ky.—Greenville Coal Co. is having plans prepared by A. L. Lassiter, Yeiser Building, Paducah, Ky., for building; one story; 44x100 feet; brick; for storehouse and general office.

St. Louis, Mo.—Pennsylvania Building Co. will erect store and office building; four stories; fireproof; estimated cost \$55,000; H. F. Roach, St. Louis, architect; Holbrook-Blackwelder Real Estate Trust Co. of St. Louis has financed the work.

Wrightsville, Ga.—E. Lovett, president Bank of Wrightsville, will soon award contract for erection of office building; two stories; brick; cost \$5000.

CHURCHES

Batesburg, S. C.—St. Paul's Mission will erect edifice. Rev. Royal G. Shannonhouse, Edgefield, S. C., is in charge.

Bishopville, S. C.—Presbyterian congregation is having plans prepared by Hamby & Hamby, 412 National Loan and Exchange Bank, Columbia, S. C., for edifice; loggia, 8x34 feet, to be tiled and supported by three columns; ordinary construction; brick; stone trimmings; slate roof; flexifold doors; patent plaster; two towers in front, each 15 feet square and one 60 feet high; art glass; circular pews; probably steam heating; electric lighting; seating capacity of auditorium 400 and of Sunday-school 300; cost, exclusive of furniture, lighting and heating, \$15,000; contract will probably be awarded in September; Rev. Hugh R. Murchison, chairman building committee.

Ensley, Ala.—M. E. Church, South, will open bids August 10 for erection of \$35,000 edifice recently mentioned, including lighting and steam heat; architect, R. H. Hunt, James Building, Chattanooga; W. B. Bridges, chairman building committee. (See "Machinery Wanted.")

Napoleonville, La.—Catholic congregation, Rev. L. H. L'Anglais, pastor, awarded contract to C. D. Stewart, Baton Rouge, La., for erection of edifice as recently reported; Roman composite style; 140x75 feet; brick and frame; electric lighting; cost \$28,000; interior will not be finished at present; plans by Diboll & Owen, New Orleans, La. (Recently mentioned.)

Opelousas, La.—St. Landry's Catholic Church awarded contract to Thibodaux & Guillot of Opelousas at \$31,000 to erect edifice; plans by Diboll, Owen & Goldstein, Ltd., Perrin Building, New Orleans, La. (Recently mentioned.)

Rice, Texas.—Haynie Memorial M. E. Church, South, contract for which was recently reported awarded to E. S. Boze, Wax-

ahachie, Texas, will be 80x100 feet; brick; wood floors; metal ceiling; character of heating and lighting plants not decided; completed cost \$21,000; J. E. Flanders, architect, Dallas, Texas.

St. Louis, Mo.—Kingshighway Cumberland Presbyterian congregation has had plans prepared by A. B. Groves, Stock Exchange Building, St. Louis, for church building; 90x74 feet; stone; mill construction; steam heat; electric lighting; cost \$100,000. Murch Bros. Construction Co., 508 Odd Fellows Building, St. Louis, have contract as recently mentioned.

Washington, D. C.—Ingram Memorial Church will soon invite bids for erection of edifice; 95x84 feet; three stories and dome; first story of Warwaset white limestone; two upper stories of Warwaset limestone brick; columns on either side of front entrance and trimmings of structure to be of same material as first story; dome lantern and all work around dome to be of reinforced concrete, surfaced on exterior in white cement finish; roof of Spanish tile; basement will contain gymnasium, 41x60 feet and 18 feet high; swimming pool, 37x29 feet, with six shower baths and 250 individual lockers; auditorium on main floor to have seating capacity of 650, including galleries; total seating capacity to be 1150; hot-water heating; electric lighting; estimated cost \$50,000; plans by James H. Warner, 600 13th street N. W., Washington, Rev. J. W. Frizzell, D.D., is pastor. (Recently mentioned.)

COURTHOUSES

Salem, Va.—Roanoke County Board of Supervisors will receive plans and specifications until August 17 for courthouse recently mentioned; estimated cost \$50,000; Charles D. Denit, clerk.

DWELLINGS

Asheville, N. C.—Dr. E. W. Grove purchased 19 acres of land with frontage of 700 feet at \$15,500, and will, it is reported, expend about \$40,000 in developing the tract as residential section; improvements will include drives, walks, parks, etc.

Durham, N. C.—B. N. Duke will build dwelling to cost \$55,000, after plans and specifications by C. C. Hook of Charlotte, N. C.

Fordyce, Ark.—A. B. Banks will build dwelling to cost \$25,000; frame; slate roof; architect, Chas. L. Thompson; contractors, Dairs & Krah, both of Little Rock, Ark.

Gadsden, Ala.—T. G. Bush, Jr., will build dwelling.

Houston, Texas.—H. L. Borden will build residence.

Houston, Texas.—J. W. Neal has contracted with Russel Brown, Houston, for erection of dwelling to cost \$10,000.

Houston, Texas.—J. M. West will build dwelling.

Kansas City, Mo.—W. C. Whitehead will erect \$22,000 residence.

Manning, S. C.—J. A. Weinberg awarded contract for erection of residence to cost \$12,000.

Nashville, Tenn.—J. M. King will build dwelling to cost \$9000; C. S. Ferguson, Nashville, architect in charge.

Nashville, Tenn.—R. S. Cheek has had plans prepared by Thomas S. Marr, Nashville, for residence recently mentioned; two stories, basement and attic; stone veneer and shingle; furnace; electric and gas lighting; cost \$8000.

Louisville, Ky.—Andrew Broadbuss, Columbia Building, will probably not erect residence on Chestnut Hill during present year; no arrangements have been made. (Recently mentioned.)

Norfolk, Va.—Richard McIlwaine awarded contract to C. W. Tyree of Norfolk for erection of dwelling to cost \$6300.

Norfolk, Va.—S. W. McGann awarded contract to C. W. Tyree of Norfolk for erection of dwelling to cost \$5700.

Pineville, Ky.—Dr. C. C. Durham will erect residence; 10 rooms; brick veneer; contract awarded.

Richmond, Va.—R. M. Kent will build \$6000 dwelling at Ginter Park; brick-veneer structure; hot-air heat; electric lights; contractor, Jos. Fox & Sons, Richmond.

San Marco, Texas.—Hays county awarded contract to Fischer & Lambie, Austin, Texas, at \$57,500 to erect courthouse; plans by C. H. Page, Jr., & Bro., Austin, Texas; Edward R. Kone, County Judge. (Recently mentioned.)

Washington, D. C.—E. N. McIntyre has had plans prepared by Joseph A. Bohn, Jr., 215 D street N. W., Washington, for three dwellings at 716 to 730 East Capitol street;

light brick and limestone; three stories and cellar; 10 rooms, trimmed in chestnut; electric lighting; bids will be opened August 6.

Washington, D. C.—T. L. Lewis, 51 U street N. W., is having plans prepared by N. R. Grimm, 627 F street N. W., Washington, for four colonial residences.

Washington, D. C.—F. D. McAuliffe, 500 D street S. E., will erect and has prepared plans for three dwellings at 512 to 516 Seward Square S. E.; three stories; brick; cost about \$10,500.

Washington, D. C.—Pumphrey & Palmer have had plans prepared by E. O. Volland, 311 R street N. W., Washington, for 10 dwellings; two stories; brick; cost \$40,000.

Washington, D. C.—Pumphrey & Palmer are having plans prepared by E. O. Volland, 311 R street N. W., Washington, for 10 two-story brick dwellings at 608-626 5th street N. W.; estimated cost \$40,000.

Washington, D. C.—O. P. Allen has had plans prepared by Joseph A. Bohn, Jr., 223 E street, Washington, for residence at 138 12th street N. E.; two stories and basement; brick and stone; light mottled brick front with Indiana Bedford stone trimmings; front porch; hot-water heating; also two-story brick automobile-house in rear; cost \$2500.

GOVERNMENT AND STATE BUILDINGS

Cape Girardeau, Mo.—Postoffice and Court-house.—Bids will be received at Treasury Department, office of James Knox Taylor, supervising architect, Washington, D. C., until September 30 for construction (including plumbing, gaspiping, heating apparatus, electric conduits and wiring) of United States postoffice and courthouse at Cape Girardeau in accordance with drawings and specifications, which may be obtained from custodian of site at Cape Girardeau or at office at discretion of supervising architect.

Houston, Texas.—Postoffice and Court-house. James McGonigle, Leavenworth, Kan., has contract at \$359,443 to construct U. S. postoffice and courthouse at Houston of granite. (Recently reported.)

Jackson, Miss.—Governor's Mansion.—Capitol Commission awarded contract to install heating apparatus in Governor's mansion recently mentioned to Peters Plumbing Co., Jackson, Miss., at \$2355.

Pine Bluff, Ark.—Postoffice.—Althaus Construction Co., St. Louis, Mo., will soon begin erection of U. S. postoffice at Pine Bluff, for which it has secured contract; foundation of rock and stone; M. M. Bruce of Pine Bluff, subcontractor, has completed excavation. (Previously mentioned.)

St. Louis, Mo.—Postoffice.—Bids will be received at Treasury Department, office of James Knox Taylor, supervising architect, Washington, D. C., until September 14 for construction (including plumbing and gaspiping) of United States postoffice in St. Louis in accordance with drawings and specifications, copies of which may be obtained from custodian of site in St. Louis or at above office at discretion of supervising architect.

Tuscaloosa, Ala.—Postoffice and Court-house.—Blue Ridge Construction Co., Asheville, N. C., has contract at \$138,447.45 to erect U. S. postoffice and courthouse at Tuscaloosa; first story of marble and balance of brick with marble cornices. (Previously noted.)

Washington, D. C.—Administration Building, etc.—Bids will be received at office of Commissioners District of Columbia (Henry B. F. Macfarland, Henry L. West and Jay J. Morrow), Washington, D. C., until August 15 for constructing administration building, workhouse for males and combination boiler and kitchen building, including heating and ventilation, located on Reservation No. 13, 19th and B streets S. E. Specifications and proposal blanks may be obtained from chief clerk, Engineer's Department, Room 427 District Building. (See "Machinery Wanted.")

Wheeling, W. Va.—Power-houses.—Bids will be received at U. S. Engineer Office, F. W. Altstaetter, Captain, Engineers, Wheeling, W. Va., until August 28 for building power-house at each of dams Nos. 18, 19 and 26, Ohio river, and until August 31 for building power-house at dam No. 13, Ohio river; information on application.

HOTELS

Flomaton, Ala.—Flomaton Hotel Co. is completing arrangements for erection of hotel; two stories and basement; 60x200 feet; fireproof; lobby will have tile floor and marble steps; second floor will contain 34 bedrooms, 7 bathrooms, public toilet, etc.; basement will contain private electric-lighting

plant, water plant with pumps, steam-heating plant, etc.; cost \$35,000. William Powell of Flomaton is temporary president; Alfred & Alfred, Pensacola, Fla., prepared plans and are managers in charge. (Noted in May.)

Florence, S. C.—C. H. Barringer has had plans prepared by Hamby & Hamby, 412 National Loan and Exchange Bank, Columbia, S. C., for proposed hotel recently mentioned; 75x176 feet; four stories in front and five in rear; front of pressed brick, Bedford limestone trimmings; copper cornice; wrought-iron balconies; tiled loggia, 6x70 feet; semi-detached construction; gravel roof; electric of hydraulic elevator; electric wiring throughout; toilets on each floor; 78 bedrooms, each containing lavatory; dining-room to be tiled; steam heat; art glass skylight.

Galveston, Texas.—Harvey L. Page Company, Moore Building, San Antonio, Texas, has about completed plans for beach hotel, erection of which is being promoted by Dr. James M. Head of Galveston. Structure will be five stories and basement; concrete, reinforced with steel; monolithic construction; Spanish mission style of architecture; tower effect in center extending six stories above main building, having four rooms on each floor, with bath connecting; total of 270 bedrooms; extending almost entirely around first floor will be arched veranda, 20 feet wide; floor of veranda, lobbies, cafe, dining and reading rooms will be paved with terrazzo marble; subbasement will contain boiler, engine-room, cold-storage and electric plant, laundry, etc.; each room will have running water, with stationary washstand, local and long-distance telephone, hot and cold salt water and hot and cold fresh water; covered stairway at rear of hotel; reported cost \$500,000. (Recently mentioned.)

Kansas City, Mo.—Webster Withers has had plans prepared by Shepard & Farrar, Minor Building, Kansas City, for apartment hotel; four stories, 141x81 feet; exterior of red vitrified brick laid in white mortar, with white glazed terra-cotta trimmings; red tile roof; first story and all partition walls above of reinforced concrete; corridors laid with red tile; cost about \$100,000.

Kinston, N. C.—Plans are being prepared for improvements to Hotel Tull, including installation of water-works system, providing lavatories in every room and 12 baths; steam heat; electric lighting; telephone system.

Memphis, Tenn.—Louis Fritz and associates contemplate, it is reported, erecting hotel at Horn Lake. (See "Miscellaneous Enterprises.")

Mobile, Ala.—A. Decovich & Sons, owners of St. Andrew Hotel, have had plans prepared by R. Benz & Sons of Mobile for six-story addition, containing 60 rooms; contract awarded to Jett Bros. Contracting Co. of Mobile. (Recently mentioned.)

Port Arthur, Texas.—Bids will be received at office of Jan Van Tyen, president of Port Arthur Hotel Co., until August 22 for erection of three-story concrete and brick hotel; estimated cost, \$125,000; certified check, \$500; plans and specifications can be obtained from C. A. Logan, architect.

Rocky Mount, N. C.—T. L. Bland and R. H. Ricks awarded contract to D. J. Rose & Co. of Rocky Mount to erect hotel; ordinary fireproof construction; roof of composition gravel; 84x168 feet; four stories, including basement; 60 rooms with bath, 15 rooms without bath; low-pressure steam heating; city electric lighting; electric elevator; cost about \$60,000; Leitner & Wilkins, Wilmington, N. C., prepared plans; H. E. Longley, Wilmington, N. C., contractor for plumbing and heating.

MISCELLANEOUS STRUCTURES

Alken, S. C.—Stable.—H. P. Dyches will erect stable; 100x90 feet; two stories; fireproof; electric lighting; hand elevator; will be used for live-stock, vehicles and harness; cost \$6000. William M. Hutto of Alken is architect and contractor. (See "Machinery Wanted.")

Austin, Texas.—Infirmary.—Sisters of St. Vincent will, it is reported, expend \$50,000 to enlarge and improve Seton Infirmary.

Annapolis, Md.—Hospital.—Annapolis Emergency Hospital has had plans prepared by Baldwin & Pennington, Professional Building, Baltimore, Md., for two-story addition and two wings; contractors estimating include Noel Construction Co., Calvert and German streets; John Waters, 23 East Bond street; Louis Gardner, 213 North Center street; Henry Smith & Sons Company, 115 Hanover street; Engineering-Contracting Co., American Building, all of Baltimore, Md.; George W. Evans, E. E. Parkinson, J. J. Stehle and J. J. Walton, all of Annapolis.

Baltimore, Md.—Hall.—Germania Turnverein, Darley Park, Henry Hofferbert, president, Baltimore, awarded contract to William C. Schnabel, 2226 East Biddle street, Baltimore, to erect hall at Harford and Darley avenues; 44x100 feet; steam heat; electric and gas lighting; stage and stairs fireproof; cost \$8000.

Cedartown, Ga.—Jail.—Polk County Commissioners of Roads and Revenues, J. L. Branch, chairman, will receive bids until August 24 for erection of jail; two stories; brick, stone and steel; 40x66 feet; to be completed by December 31; plans and specifications on file at County Commissioners' office in Courthouse and of Fred Wagener & Son, architects, 272 Gordon street, West End, Atlanta, Ga.; certified check, \$1000. (Date postponed from July 27, as recently stated.)

Chattanooga, Tenn.—Store Building.—Nunnally Candy Co. of Atlanta, Ga., will remodel store building at 824 Market street; front to be of mahoganyized birch; interior of white Georgia marble, red mahogany and mirrors; vestibule of marble mosaic; heating by furnace; steam or hot water not decided; tile flooring probably; \$10,000 to be expended; W. T. Downing, News Building, Chattanooga, is architect.

Corinth, Miss.—Weaver Building Co. incorporated with \$35,000 capital stock by R. M. Weaver, Tom P. Weaver, O. L. Meek and others.

Crisfield, Md.—B. F. Gibson has had plans prepared by Jacob F. Gervig, Vansant Building, 210 East Lexington street, Baltimore, for business building at Crisfield; two stories; 70x80 feet; first floor will contain three stores, 22x80 feet each; second floor, lodgeroom, 50x40 feet, and three offices.

Kissimmee, Fla.—Lodge Building.—Knights of Pythias and Masons have had plans prepared by W. B. Talley, 511 West Building, Jacksonville, Fla., for lodge building recently mentioned; 41x95 feet; three stories; electric lights; first floor two storerooms; second, opera-house; third, lodgeroom.

Fort Smith, Ark.—Business Building.—T. P. Edwards will erect two-story brick business building.

Fort Worth, Texas.—Lodge Building.—B. P. O. Elks' Lodge, No. 124, will erect lodge building 90x100 feet; brick; fireproof; five stories and basement; cost \$75,000.

Jacksonville, Fla.—Clubhouse.—Henry Davis Aerie, No. 1239, Fraternal Order of Eagles, contemplates issuing bonds for erection of \$25,000 clubhouse; Myron Mooney, A. W. Barrs and others, building committee. (Recently mentioned.)

Macon, Ga.—Store Buildings.—P. D. Wingham awarded contract to Jones Bros., Macon, for erection of two store buildings; 30x80 feet; two stories high; hand-power elevators; buildings to cost \$13,000.

Mobile, Ala.—Veterinary Infirmary.—Dr. J. C. Edwards awarded contract to Jett Bros. Construction Co., Mobile, for erection of veterinary infirmary.

Mobile, Ala.—Business Building.—G. B. Thames will erect three-story business building.

Montgomery, Ala.—Business Building.—J. C. Young will erect building; two stories; brick; cost \$10,000.

Nashville, Tenn.—Home.—Old Woman's Home will erect building; two stories; brick; 90 feet front, with two wings extending back 82 feet on each side; cost \$18,000.

Norfolk, Va.—Clubhouse.—Country Club has had plans prepared by Neff & Thompson, Norfolk, for clubhouse; cost about \$2500.

Norfolk, Va.—Store Building.—C. M. Barry awarded contract to Richardson & Baumgardt, Norfolk, for erection of proposed store building; four stories; 31x90 feet; brick; metal windows; fire doors; ordinary construction; electric freight elevator; cost \$12,000; plans by Benjamin Fritchlee, Norfolk.

Oklahoma City, Okla.—Business Building.—Mrs. E. H. Ellis will build business structure; 40x100 feet; reinforced concrete; brick and tile front; architect, D. W. F. Turbyfill, Oklahoma City.

Oklahoma City, Okla.—Business Building.—J. G. Street will erect business building; 85x100 feet; three stories and basement; fancy brick and tile front; reinforced concrete; cost \$20,000; architect, D. W. F. Turbyfill, Oklahoma City.

Pecos, Texas.—Business Building.—Bids will be received until August 15 for erection of building for Pecos Mercantile Co. Plans can be seen at Pecos and at office of Lang & Wittich, architects, Dallas, Texas; certified check, \$300.

Pensacola, Fla.—Store Building.—Welles Kahn Company has had plans prepared by William Bormans, Pensacola, for remodel-

ing and improving store building; two stories; 125x225x125 feet; reinforced-concrete foundation; tar and gravel roof.

Richmond, Va.—Memorial Building.—Virginia Grand Lodge, Knights of Pythias, will erect Samuel Holder Hines Memorial building; cost between \$40,000 and \$50,000.

St. Petersburg, Fla.—Business Building.—Marine Supply Co., Tracey Lewis, manager, will erect business building recently mentioned; will be erected by day work; W. E. Allison, foreman; 32x80 feet; two stories; red pressed brick; plate-glass windows on first floor; east corner will be plate glass extending 12 or 15 feet each way; fireproof; electric lighting; cost \$8000.

Washington, D. C.—Clubhouse.—Army and Navy Club, 1622 I street N. W., Henry H. Ward, treasurer, will erect clubhouse at 17th and I streets N. W.

Winchester, Ky.—Fraternal Building.—Masons and Knights of Pythias awarded contract to J. W. Wheeler, Winchester, at \$18,033.50 for erection of fraternal building. (Recently mentioned.)

MUNICIPAL BUILDINGS

Augusta, Ga.—City Hall.—City awarded contract to T. O. Brown & Sons of Augusta at \$259,750 for erection of City Hall; Georgia granite throughout, which will probably be furnished by J. H. McKenzie's Sons and W. F. Bowe, both of Augusta; plans by L. F. Goodrich, Augusta. (Recently mentioned.)

Chattanooga, Tenn.—Fire Hall.—Board of Public Works, H. F. Van Dusen, chairman, will receive bids until August 7 for remodeling No. 3 fire hall; certified check, \$500; plans and specifications on file at office of Adams & Alsop, architects, James Building; estimated cost \$5000. (Mentioned recently.)

Guthrie, Okla.—Convention Hall.—City awarded contract to Manhattan Construction Co., New York, for erection of convention hall; 200x100 feet; ordinary, fireproof construction; will contain auditorium and offices; estimated cost \$250,000; plans by P. H. Weathers of Guthrie. (Recently mentioned.)

Little Rock, Ark.—Hospital.—City contemplates beginning within six months erection of addition to Logan H. Roots Memorial Hospital; O. K. Judd, superintendent of hospital. (Noted in June under "Miscellaneous Structures.")

McAlester, Okla.—Jail.—City will not vote August 4 on issuance of \$7000 of bonds for erection of jail building, recently mentioned; G. M. Chany, Mayor.

St. Louis, Mo.—City is planning various municipal improvements. A. J. O'Reilly, president Board of Public Improvements, has issued plans and specifications for work costing about \$100,000, including erection of fire-engine houses Nos. 26 and 37, new stable at Female Hospital, comfort station at 2d street and Washington avenue and Court-house square, and installation of temporary boilers at Insane Asylum. Plans have also been completed for comfort stations at Carr Park, St. Louis place and Yeatman square. Plans will be prepared for erection of stables in Forest Park at cost of \$15,000, boat-house at Carondelet Park at cost of \$2500, etc.

Woodlawn, Station Birmingham, Ala.—City Hall, etc.—City awarded contract to Charles W. Hall of Birmingham for erection of city hall, jail and fire-department building recently mentioned; brick; 65x110 feet; terra-cotta trimmings; copper cornice; steam heat; electric lighting; completed cost about \$22,000; plans by R. E. Posey of Birmingham.

RAILWAY STATIONS

El Reno, Okla.—Chicago, Rock Island & Pacific Railway, J. B. Berry, chief engineer, Chicago, Ill., contemplates, it is reported, enlarging passenger station and erecting five-story office building at El Reno.

Eunice, La.—Chicago, Rock Island & Pacific Railway, J. B. Berry, chief engineer, Chicago, Ill., does not contemplate at present erection of brick passenger station, costing \$25,000, at Eunice, recently reported.

Seguin, Texas.—Galveston, Harrisburg & San Antonio Railway has had plans prepared by bridge engineer, D. K. Colburn, Houston, Texas, and awarded contract to Brooks-Gordon Construction Co., Stewart Building, Houston, Texas, for erection of passenger depot at Seguin; 25x50 feet; one story; pressed brick; slate roof; tile floors; hardwood trimmings; plumbing; electric lighting; cost \$15,000.

SCHOOLS

Alton Park, N. C.—Hamilton Board of Education awarded contract to A. W. Duncan, Chattanooga, Tenn., for erection of school

building at Alton Park; one story; four rooms; brick; cost \$6528.

Attalla, Ala.—City awarded contract to A. J. Brown, Gadsden, Ala., for erection of high-school building recently mentioned; cost \$15,000; plans by Frank Lockwood, Montgomery, Ala.

Baltimore, Md.—Sisters of Notre Dame, Alsquith street and Ashland avenue, awarded contract to Otto Goldbach, 321 Register street, Baltimore, for laundry building; 28x50 feet; two stories; brick; cost \$5000; plans by Baldwin & Pennington, Professional Building, Baltimore.

Baton Rouge, La.—Louisiana State University is advertising for bids for completion of chemical laboratory recently mentioned; 155x73 feet; three stories; colonial; reinforced concrete; brick walls; iron and concrete floors and partitions; fireproof; forced-draft heating; electric lighting; cost about \$70,000; plans by Gavrot & Livaudais, 839 Gravier street, New Orleans, La.

Birmingham, Ala.—Howard College, A. P. Montague, president, does not contemplate erecting college building in near future. (Recently mentioned.)

Bradley, Okla.—City has voted \$10,000 bond issue for erection of school building. Address The Mayor.

Bridgeport, Ala.—Alatenga College is having plans prepared by D. V. Stroop, James Building, Chattanooga, Tenn., for dormitory; two stories and basement; cement block and stucco; metal tile shingle roof; steam heat; cost \$5000. Plans are also being prepared for remodeling main building, installing steam-heating equipment and laying outside concrete walks.

Brunswick, Ga.—City will have plans prepared by J. F. Leithner, Wilmington, N. C., for Glynn county high-school building; estimated cost \$35,000.

Calvin, Okla.—City has adopted plans and specifications and awarded contract for erection of school building. Address The Mayor.

Charleston, Miss.—City will receive bids until September 1 for erection of brick school building; bids will be received with and without heating and plumbing or on each separately; certified check \$1000; for plans and specifications address J. W. Saunders, Mayor, Charleston, or P. J. Krouse, architect, Meridian, Miss. (Recently mentioned. See "Machinery Wanted.")

Charlotte Court House, Va.—County awarded contract at \$6475 to Haynes Bros. of Chatham, Va., for erection of school.

Chattanooga, Tenn.—City has had plans prepared by H. L. Huntington, Chattanooga, for Sunny Side school building; cost \$15,000.

Clinton, Okla.—City will erect \$15,000 school building. Address The Mayor.

College Station, Texas.—Plans and specifications for engineering building for Agricultural and Mechanical College of Texas will be submitted to board of directors on August 7. Structure will be of pressed brick; stone or imitation stone trimmings; interior fireproof construction; inside walls to be steel lathed, plastered on each side to make them soundless; floors to be of cement, covered with wood; roof to be graveled; steam heat; each floor to be divided into three sections, each about 40x60 feet; estimated cost \$65,000. Dr. H. H. Harrington is president. (Recently mentioned.)

Crawfordville, Ga.—City has had plans prepared by C. H. Golucke & Son, Crawfordville, for school building recently mentioned; two stories; steam heat; ordinary construction; first floor, schoolrooms; second floor, auditorium; cost \$8000; contract to be awarded August 10.

Houston, Texas.—Lucas & Smith of Houston are lowest bidders at \$34,633 for erection of school building recently mentioned; brick; 100x180 feet; two stories and basement; slate roof; low-pressure steam heat. The Keithly Company of Houston is lowest bidder at \$1550 for plumbing and \$2350 for steam heating.

Darke Branch, Va.—School Board awarded contract to Haynes Bros., Chatham, Va., for erection of school building recently mentioned; two stories; brick; ordinary construction; hot-air heat; 50x50 feet; plans by Charles M. Robinson, 10th and Main streets, Richmond, Va.

DeFuniak Springs, Fla.—William W. Flournoy, Mayor, will receive bids until August 14 for erection of 10-room school building with assembly hall; proposal sheets furnished by town; certified check, 3 per cent. of bid; bond of 25 per cent. of contract price; plans and specifications on file at office of Mr. Flournoy and Solomon-Norcross Company, engineer, 1622-23 Candler Building, Atlanta, Ga.; bidders may obtain same by enclosing check for \$5, payable to engineer.

Eustis, Fla.—Presbyterian College of Florida, Austin H. Jolly, president, has had plans prepared by William H. Jolly for college building and chapel recently mentioned; 54x92 feet; brick and cement; hot-air heating; electric lighting; cost \$12,000. (See "Machinery Wanted.")

Graymont, P. O. Birmingham, Ala.—City has voted \$30,000 of bonds for erection of school buildings. Address The Mayor.

Dickson, Tenn.—City has voted the recently-proposed bond issue for \$3000 as part of amount to erect \$15,000 school. Address The Mayor.

Hagerstown, Md.—Board of School Commissioners of Washington county, John P. Fockler, secretary, has had plans prepared by J. W. Woltz, Waynesboro, Pa., for school building; eight rooms; brick; ordinary construction. (Recently mentioned.)

Linden, Ala.—City has voted \$10,000 of bonds for erection of proposed school building. Address The Mayor.

Little Rock, Ark.—College of Physicians and Surgeons will expend about \$15,000 in remodeling interior of 70-room four-story hospital; ordinary construction; hot-water heating plant; boilers for heating; electric lighting; electric elevator; cost \$15,000; W. A. Snodgrass, M.D., secretary. (See "Machinery Wanted.")

Luther, Okla.—City has voted \$8000 of bonds for erection of school building. Address The Mayor.

Lynchburg, Va.—Virginia Christian College will submit plans to contractors for erection of boys' dormitory to cost about \$30,000, and expects to award contract about August 15; will also erect college building to cost about \$30,000.

Lynchburg, Va.—Brookville School Board will open bids August 8 for erection of eight-room school building in West Lynchburg; certified check, \$300; plans and specifications on file at office of Lewis & Burnham, Lynchburg; John Williams, clerk, Lynchburg, R. F. D. No. 1.

Montevallo, Ala.—Alabama Girls' Industrial School, T. W. Palmer, president, will open bids August 14 for erection of laundry building; one story; brick; plans and specifications on file at office of William Ernest Spink, architect, Title Guarantee Building, Birmingham, Ala.

New Martinsville, W. Va.—Board of Education of Magnolia District, Wetzel county, West Virginia, will open bids August 8 for erection of two-story school building and outbuildings near mouth of Little Fishing creek, also for removal of North Bend school-house further down the creek; plans and specifications on file at office of James P. Chaplin, architect, New Martinsville; James A. Pyles, president.

New Orleans, La.—City contemplates erection of Beauregard School building; plans and specifications to include gymnasium; E. T. Hardee, City Engineer.

Newport News, Va.—Bids will be opened August 5 for erection of school and dormitory building and dining-room, kitchen and laundry building for Virginia State School for Colored Deaf and Blind Children; plans and specifications on file at office of C. T. Holtzclaw, architect, Merchants' National Bank Building, Hampton, Va., or from William C. Ritter, superintendent, Hotel Warwick, Newport News.

Paducah, Ky.—City will probably vote in September on \$50,000 or \$75,000 bond issue for erection of school buildings. Address The Mayor.

Rossville, Ga.—City awarded contract to R. W. Andrews for erection of proposed \$5000 school building.

Ripley, Tenn.—Lauderdale county awarded contract to Pugh, Hathaway & McCabe of Ripley for construction of proposed school; brick; low pressure steam heat; completed building to cost \$15,000; architect, Thos. S. Marr, Nashville, Tenn.

Russellville, Ala.—Y. M. Quinn, secretary building committee, will receive bids until August 10 for erection of Franklin county high-school building; for further information, plans and specifications, address J. S. Irwin. (Recently mentioned.)

Salinas, Okla.—City is having plans prepared by Basham & Fry, Van Buren, Ark., for school building; 12 rooms; pressed brick with stone trimmings; cost \$25,000.

St. Louis, Mo.—David Ranken, Jr., School of Mechanical Trades, Louis Gustafson, director, has had plans prepared by Eames & Young, St. Louis, for school building; brick and terra-cotta; light and power supplied by plant in building; interior finished in hardwood; will contain five tradesrooms, four classrooms and assembly-room to accommodate 200 pupils.

Vicksburg, Miss.—St. Aloysius College awarded contract at \$14,165 to H. H. Davis of Vicksburg for construction of proposed addition; architect, M. J. Donovan of Vicksburg.

Wewoka, Okla.—City awarded contract to Hayes & Beagles, Nevada, Mo., at \$19,281 for erection of school building. (Mentioned in June.)

THEATERS

Greensboro, N. C.—S. A. Schloss has secured 10-year lease of 96 feet of west end of hippodrome, which he will convert into theater with seating capacity of 1284; \$9000 will be expended for electrical equipment; plans prepared by Hook & Rogers, Trust Building, Charlotte, N. C. (Recently mentioned.)

Tampa, Fla.—W. H. Kendrick will erect theater; two stories; brick; cost \$15,000; plans by Bonfoey & Elliott of Tampa.

WAREHOUSES

Amite, La.—Amite City Warehouse Union Co., C. H. Morse, president, will build warehouse 100x100 feet, to replace structure destroyed by tornado.

Baltimore, Md.—United Fruit Co., Cecil Buckman, manager, 104 East Pratt street, awarded contract to Baltimore Bridge Co., Minor C. Keith, president, Bush street and Baltimore & Ohio Railroad, Baltimore, for erection of office building and storage sheds on Pier 1; plans by Otto G. Simonson, American Building, Baltimore. (Noted in June.)

Benton, Ark.—Farmers' Union Warehouse Co. will erect warehouse.

Birmingham, Ala.—Birmingham Realty Co. awarded contract to C. W. Brown of Birmingham to erect furniture warehouse recently reported; 50x200 feet; three stories; brick, with pressed-brick front; mill construction; freight elevator, capacity 3000 pounds, 50 feet per minute; cost \$15,000; plans prepared by H. D. Breeding of Birmingham. (See "Machinery Wanted.")

Houston, Texas.—Diasen & Schneider will remodel building as produce warehouse. (See "Ice and Cold-Storage Plants.")

Lancaster, S. C.—Farmers' Union Warehouse Co. has completed organization with E. B. Lingle, president; C. L. McManus, vice-president; W. M. Moore, secretary-treasurer; J. F. Nisbet, manager; capital stock \$5000; will erect cotton warehouse, 60x100 feet, with brick fire walls; will use day labor; cost \$5000.

Magazine, Ala.—Chicago Coal & Lumber Co., Mobile, Ala., awarded contract to Jett Bros. Contracting Co. of Mobile to erect lumber warehouse 40x100 feet.

Mount Calm, Texas.—Farmers' Union Warehouse Co. incorporated with \$4000 capital stock by J. A. Rush, G. R. Calloway, J. G. Davis and others.

Newhebron, Miss.—Farmers' Union Warehouse Co. incorporated with \$10,000 capital stock by D. F. Holmes, A. Thurman and others.

Pensacola, Fla.—T. E. Welles will receive bids until August 20 for erection of grocery warehouse, recently mentioned; 125x150 feet; brick; two stories; ordinary construction; electric lighting; electric elevator; cost \$25,000; plans by Mr. Boseman of Pensacola.

Purvis, Miss.—Lamar County Farmers' Union Warehouse Co. incorporated with \$1300 capital stock by John Whiddon, Albert Bounds and others.

Richmond, Va.—American Terminal Warehouse Corporation awarded contract to I. J. Smith & Co. of Richmond for concrete work in construction of reinforced-concrete warehouse; 100x100 feet; four stories and basement; electric elevators; can be divided into stores 16 feet wide; plans by D. I. Davis, Chicago, Ill.; Carneal & Johnston (W. Leigh Carneal, architect, and J. A. Johnston, consulting engineer), Room 203 Bank of Richmond Building, Richmond, will supervise construction.

St. Louis, Mo.—St. Louis Independent Packing Co. will, it is reported, build cold-storage warehouse and 60 cattle-pens.

Tifton, Ga.—Tift County Farmers' Co-operative and Educational Union will soon begin erection of brick cotton warehouse 75x200 feet.

Wrightsville, Ga.—Johnson County Farmers' Union contemplates erecting cotton warehouse costing about \$3000.

Represent Ridgway Co. at Atlanta.—The Ridgway (Pa.) Dynamo & Engine Co. has established a sales agency at Atlanta for its complete line of side and center-crank engines and direct-current electrical machinery. This agency is at 1021 Prudential Building, Atlanta, Ga.

RAILROAD CONSTRUCTION RAILWAYS

Artemus, Ky.—The Cumberland Railroad will, it is reported, continue construction of its line from Pineville, Ky., to Jellico, Tenn., 75 miles, financial arrangements having been made. S. P. Condon of Knoxville, Tenn., is the contractor; B. C. Milner of Warren, Ky., is chief engineer; C. W. Stone of Warren, Pa., is president.

Asheville, N. C.—R. S. Howland is reported as saying that he is considering a plan to build an incline railway to Overlook Park. Engineers are at work.

Asheville, N. C.—The Asheville Dray, Fuel & Construction Co. has begun work on the Weaverville Electric Railway, four miles long, from New Bridge Station, on the Asheville Rapid Transit line, to Weaverville, N. C. R. M. Ramsey is manager for the contractor.

Augusta, Ga.—The Manufacturers' Record is officially informed that the Central of Georgia Railroad Co. is not making any improvements at Augusta, nor are any contemplated in the near future.

Beaumont, Texas.—Concerning the report that a tramroad would be built from Maurice to Landry, Mr. A. C. Barber of Cleburne, Texas, informs the Manufacturers' Record that the Barber Lumber Co. of Hartburg is building such a line into timber lands three miles, but is heading toward the Orange & Northwestern Railway, seven miles distant. It is standard gauge, but only to be used for timber.

Birmingham, Ala.—President H. M. Atkinson of the Atlanta, Birmingham & Atlantic Railway is reported as saying that track has been laid to a point within five miles of Pelham, Ala., and the connection with the Louisville & Nashville Railroad at the latter place will be in use within two months. This will give service into Birmingham.

Cairo, Ga.—The Pelham & Havana Railway Co. has, it is reported, begun grading for its proposed line from Cairo, Ga., to Havana, Fla., 28 miles. Z. R. Hutcheson is engineer and W. W. Griffin is president at Cairo.

Citronelle, Ala.—Rights of way are being secured for the proposed electric railway from Citronelle to Mobile, Ala. The Mayor may be able to give information.

Columbia, Tenn.—The Middle Tennessee Railroad Co. is reported to be making good progress with construction of its line from Franklin to Leatherwood, Tenn. Meade Friserson is in charge of work. Contractors at work on the Franklin end and engineers at the Leatherwood end. Road may be extended to Corinth, Miss.

Columbus, Ga.—L. H. Chappell has been appointed chairman of a subcommittee of the Board of Trade to secure charter and make survey for the proposed railroad from Columbus to Montgomery, Ala., via Crawford, Marvin, Society Hill and Tuskegee. J. Albert Kirven is chairman of the general committee. Josiah Flournoy, civil engineer, is expected to make the survey for the line, which will be about 78 miles long.

Corsicana, Texas.—J. V. Watkins, with Geo. A. Duren, civil engineer, is reported to be going over the ground for the proposed railway from Corsicana to Palestine, Texas.

Dawson, Ga.—Mr. T. H. Hazelrigg, chief engineer, 126 East Market street, Indianapolis, Ind., informs the Manufacturers' Record that the Georgia Southwestern & Gulf Railroad Co. amended its charter, increasing capital to \$4,000,000. The proposed line, as officially stated on July 2, is from Albany, Ga., to St. Andrews Bay, Fla., 160 miles, including a branch to Dawson, Ga. No other construction is contemplated. W. M. Legg is president and general manager at 435 Washington avenue, Macon, Ga.

El Reno, Okla.—The Missouri, Kansas & Texas Railway Co. is reported, contemplates building a line from either Oklahoma City or Guthrie to El Reno and thence southwest to connect with its lines in Texas. S. B. Fisher is chief engineer at St. Louis, Mo.

Fernandina, Fla.—The committee of 15 appointed to make plans for building the proposed railroad to connect with the Atlantic Coast Line has organized by electing John G. McGiffin chairman, F. W. Hoyt treasurer and A. P. Murphy secretary.

Fort Smith, Ark.—The Cherokee Construction Co. is reported to have filed an assignment of trust to the Girard Trust Co. for \$2,500,000, which amount is to improve its mining company and also for the further projection of the Midland Valley Railroad. C. E. Ingersoll is president of the railroad at the Girard Building, Philadelphia, Pa., and J. F. Holden is vice-president and general manager at Muskogee, Okla.

Fort Worth, Texas.—Mr. Cunningham of St. Louis is reported to have begun survey for the proposed electric railway projected from Fort Worth to Mineral Wells by J. R. Duffy of St. Louis and others.

Fort Worth, Texas.—Officers of the Missouri, Kansas & Texas Railway are reported as saying that they contemplate expending \$500,000 in Fort Worth for various improvements. This will include terminals, yards and shops. S. B. Fisher is chief engineer at St. Louis.

Garnett, Ga.—The Savannah Valley Railroad Co. has been chartered to build a line from Garnett to Sylvania, Ga., 15 miles south; capital \$50,000. E. F. Comer of Garnett and L. J. Kilpatrick of Athens, Ga., are organizers.

Glamorgan, Va.—Reported that the Currier Lumber Co. of Glamorgan, Va., owning a 15-mile railroad, will build an extension from Pound, Va.

Homer, La.—The taxpayers of Ward 7 in Claiborne parish have voted a five-mill tax for 10 years to raise not more than \$50,000 in aid of the Shreveport & Northeastern Railroad now building between Homer and Shreveport, La.

Jackson, Ky.—O. P. Rollins of Jacksonville, Fla., owning coal lands in the vicinity of Hindman, Ky., is reported to contemplate building a railroad to develop them, starting from Jackson along the north fork of Kentucky river via Hazard and Whitesburg, and through the Boone Fork and Elkhorn fields to Elkhorn City, Ky. It may be noted that the Lexington & Eastern Railway contemplates some day to extend from Jackson into Perry county.

Kansas City, Mo.—A. F. Hunt, president of the Missouri & Kansas Interurban Railway Co., operating from Kansas City to Olathe, Kan., 21 miles, is reported as saying that the conversion of the line to electricity will probably be completed by October 15.

Kansas City, Mo.—Reported that the Kansas City Union Trust Co. is being organized to finance a system of interurban electric railways for the Interstate Railway & Power Co., which proposes to build from Kansas City to various points in Kansas and Oklahoma, including Lawrence, Topeka, Coffeyville, Cherryvale, Parsons and Independence, Kan.; Tulsa, Muskogee, Guthrie, Oklahoma City and Shawnee, Okla.; also Joplin, Mo.

Lake Charles, La.—President W. P. Weber of the Lake Charles Railway & Navigation Co., recently chartered, writes the Manufacturers' Record that it now has 20 miles of standard-gauge railroad operating from Hecker, La., but it is hoped to extend soon five miles into Kinder, La., and connect with the Colorado Southern. The company also operates a large line. Geo. M. King is vice-president and treasurer at Lake Charles, and D. A. Kelly is general manager at Edna, La.

Leslie, Ark.—The Missouri & North Arkansas Railroad Co. has filed a certificate for the extension from Pangburn to Helena, Ky. W. S. Dawley is chief engineer at St. Louis, Mo.

Lexington, Ky.—The Bluegrass Traction Co. has filed a mortgage to secure \$200,000 of bonds, the proceeds of which are to be used for improvements and equipment.

Lexington, Ky.—Mr. John Blair MacAfee, vice-president of the Lexington & Interurban Railways Co., 3d and Walnut streets, Philadelphia, informs the Manufacturers' Record that contracts have not yet been let for the proposed line from Lexington to Nicholasville, Ky., 12 miles. Reported that the line will cost complete between \$275,000 and \$399,000. Additional improvements in Lexington and the construction of the Winchester system cost from \$350,000 to \$550,000 more. Work is reported begun by the railroad company on the Nicholasville line pending award of contract.

Lexington, Texas.—M. R. Hoxie of Lexington, promoter of the Taylor & Somerville Railway Co., chartered some time ago to build from Taylor to Somerville, is reported to contemplate an extension to San Saba, Texas.

Mangum, Okla.—The Colorado, Texas & Mexico Railroad is reported to be receiving at Mangum track and bridge material for the first section from Mangum to Olustee, Okla., 25 miles. The Colorado Construction Co. of Mangum is the general contractor. M. R. Locke is president of the railroad at Mangum.

Marion, Va.—The Manufacturers' Record is informed that the Marion & Rye Valley Railway and the Virginia Southern Railway have been consolidated under the latter name and an extension of 25 miles will be built to ore deposits in North Carolina, in which the Virginia Coal, Iron & Railroad Co. is interested. Construction contract is

not yet awarded, but bids are being received to begin work by September 1. W. D. Leeper is engineer at Marion, Va.

McGehee, Ark.—The St. Louis, Iron Mountain & Southern Railroad (Missouri Pacific system) is reported to have let contracts to L. J. Smith of Kansas City, Mo., for \$250,000 worth of ballasting on the valley division between McGehee, Ark., and Riverton, La., 118 miles, also from Eldorado to Felsenthal, Ark., 32 miles, the latter being on the Eldorado & Bastrop road.

Memphis, Tenn.—Contract is reported let to M. J. Roach to build the line of the Lake View Traction Co. from Memphis, Tenn., to Lake View, Miss., 12 miles, to be completed by January 1 next; cost, including equipment, about \$189,000. R. F. Tate is president and W. W. Hayden chief engineer at Memphis, Tenn. Louis Fritz and associates are also said to be interested.

Meridian, Miss.—Survey for the Lake Stone Railway Co. is reported completed from Meridian to Louin, Miss., about 30 miles, and will be continued to Mendenhall, 75 miles in all.

Mt. Sterling, Ky.—Surveys are reported under way for the proposed Cincinnati, Kentucky & Virginia Railway, in which the owners of the Licking River Railroad of Yale, Ky., are interested. The first work to be done is to build an extension of about 50 miles from the latter road to the Louisville & Nashville Railroad. The extension may run via either Paris or Carlisle, Ky. Harold R. Stone, 652 Railway Exchange Building, Chicago, Ill., is president.

Muskogee, Okla.—Muskogee Commercial Club is reported to have accepted the offer of the St. Louis, Oklahoma & Southern Railroad Co. to build into Muskogee and establish terminals, the city to give \$50,000 when the road is in operation.

New Orleans, La.—The New Orleans Great Northern Railroad Co. is reported, will resume work immediately on the construction of its line to Jackson, Miss. N. G. Peat sail is general manager at Covington, La., and J. F. Coleman is chief engineer, Illinois Bank Building, New Orleans.

Paris, Texas.—W. B. Rollins, Kansas City, Mo., is reported as saying that the Texas Union Traction Co. of Paris, Texas, is to build a standard-gauge electric railway from Paris to Bogota, Texas, about 25 miles; will finally extend in the same direction 25 miles more to connect with a steam road; preliminary survey made. C. P. Moore of Longfellow, Texas, is president, and John T. Upchurch of Clarksville, Texas, is treasurer.

Perry, Okla.—An officer of the Santa Fe writes the Manufacturers' Record saying that there is nothing in the press report that the Tonkawa branch will be extended to Perry, Okla. The extension has not been contemplated or even discussed.

Pineville, Ky.—N. R. Patterson, William Burchfield and B. R. Smith are reported to have secured \$16,000 of subscriptions for an electric railroad from Pineville to mines on Straight creek.

Roanoke, Va.—The Roanoke Traction & Light Co. has been chartered to build an electric railway connecting Roanoke, Clifton Forge, Lynchburg and other points in Virginia, altogether about 200 miles of line; authorized capital stock, \$2,000,000. The directors are James P. Woods, president; R. C. Jackson, vice president; James C. Martin, secretary and treasurer; W. W. Cox and Joseph H. Chitwood, all of Roanoke. The minimum capital is \$500,000, and it is said the company will also own or lease heating, lighting and power plants. The electric power will be obtained from a plant at the "Horseshoe," on the James river above Lynchburg. Address F. H. Shelton, Pennsylvania Building, Philadelphia, Pa. He is treasurer of the Roanoke Railway & Electric Co. Later—Mr. Shelton writes the Manufacturers' Record saying that the new company has been organized for corporate and financial purposes, which does not carry with it at present any special new construction of any sort.

Roanoke, Va.—Mr. S. G. Whittle, Jr., secretary and treasurer of the Roanoke & Bent Mountain Railway Co., writes the Manufacturers' Record that it is proposed to build a passenger and freight line from Roanoke to Floyd, Va., about 45 miles, and that electricity will probably be the motive power. No contracts have yet been let. The officers are W. H. Price, president, Elliston, Va.; J. Coles Terry, first vice-president, Bent Mountain, Va.; L. L. Greenwood, second vice-president, Cave Spring, Va.; S. G. Whittle, Jr., secretary and treasurer, Roanoke, Va. Directors, J. Coles Terry, Bent Mountain, Va.; J. C. Coles, Air Point, Va.; W. R. West, Salem, Va.; L. L. Greenwood, Cave Spring, Va.; Samuel R. Brame, Floyd, Va.;

F. A. Thornberry, Roanoke, Va., and W. H. Price, Elliston, Va.

Sanford, Fla.—The Sanford & Everglades Railroad Co. has just been organized in Sanford to build from Sanford to the Everglades; president, A. T. Rossiter; vice-president, L. O. Chase; secretary, J. N. Whitner; treasurer, F. P. Foster; general manager, A. P. Connelly.

St. Paul, Va.—The Carolina, Clinchfield & Ohio Railway is reported to be pushing tracklaying, having already completed line from St. Paul, in Wise county, to Dunganon, in Scott county, the grading being completed. It is said that the company is seeking more hands to rapidly complete the work.

Tampa, Fla.—The Seaboard Air Line way, it is reported, will begin track construction immediately for its proposed terminals at Grassy Island, near Tampa. W. L. Seddon is chief engineer at Portsmouth, Va.

Temple, Texas.—Reported that over \$62,000 have been subscribed at Temple for the proposed electric interurban railway to connect Temple, Marlin and Salado, Texas. F. F. Downs, president of the First National Bank of Temple; William Glnuth, Mayor of the city; Charles M. Campbell, president of the City National Bank, and others are interested, including A. F. Bentley, president of the Bentley Realty Co.

Tuscaloosa, Ala.—The Birmingham & Gulf Construction Co. is reported to have given up its contract to build the line of the Birmingham & Gulf Railway & Navigation Co. from Tuscaloosa to Gadsden, Ala., via Birmingham, and the equipment has been turned over to the railroad company. J. T. Pultz of New York is reported to have succeeded J. A. Vandergrift of Philadelphia as general manager. E. F. Ensten, Jr., of Birmingham is also reported to have been appointed superintendent.

Wasioto, Ky.—The Kentucky Southeastern Railroad Co., capital \$50,000, has been chartered to build a line 10 miles long in Bell county, Ky., beginning about 500 feet south of milepost 26 on the Louisville & Nashville Railroad. The incorporators are T. J. Asher, Robert Asher, G. M. Asher, M. Brandenburg and R. W. Crech of Wasioto and William Low of Pineville, Ky.

Wasioto, Ky.—The Wasioto & Black Mountain Railroad Co., capital \$50,000, has been chartered in Bell county by T. J. Asher, Robert Asher, G. M. Asher, M. Brandenburg; A. J. Asher of Wasioto, Ky.; William Low of Pineville, Ky., and R. W. Crech of Wasioto. T. J. Asher & Sons of Wasioto are in the lumber business. Line to begin at a point 500 feet south of milepost 26 on the Louisville & Nashville Railroad and to run up Cumberland river to Toms creek, about 10 miles.

Wheeling, W. Va.—Reported that A. D. Denalo of the Wheeler & Denalo Construction Co. of New York is arranging details for beginning work on the proposed Parkersburg & Ohio Valley Traction line, and that construction will begin within two weeks between Friendly and Williamstown, 37 miles.

Williamsburg, Va.—The Chesapeake & Ohio Railway is reported to have ordered double-track work resumed on its peninsula division. H. Pierce is engineer of construction at Richmond, Va.

STREET RAILWAYS

Baltimore, Md.—The United Railways & Electric Co. has begun construction near Roland Park on its boulevard line. W. A. House is president.

Dothan, Ala.—J. R. Keyton, it is reported, has applied for a street-railway franchise in Dothan.

Fayetteville, N. C.—The Fayetteville Street Railway & Power Co. is pushing construction on its extension to Hope Mills.

Hagerstown, Md.—An officer of the Hagerstown Railway Co. writes the Manufacturers' Record denying the press report that a railway extension will be built to Security, Md., two miles.

Kansas City, Mo.—The Metropolitan Street Railway Co. will, it is reported, extend the Prospect Avenue line from 29th street southward to a point beyond Brush Creek. Bernard Corrigan is president.

Mount Pleasant, Texas.—A letter to the Manufacturers' Record says that the street railway proposed for Mount Pleasant is to be about four miles long; will run on all principal streets and to Red Springs Lake and Delwood Park; construction to begin within a month; gasoline motor cars to be used. H. W. Peterman may give further information.

Raleigh, N. C.—The Raleigh Electric Co., it is reported, will build a street-railway extension through Boyland Heights southwest.

William J. Andrews of Raleigh is the president.

Raleigh, N. C.—The Raleigh Electric Co. has completed the Martin Street extension to a point near the Soldiers' Home.

Spartanburg, S. C.—The Spartanburg Railway, Gas & Electric Co. will, it is reported, build about 10 miles of additional track.

Uvalde, Texas.—John T. Smith of Kerbey & Smith, principal owners of the Uvalde Street Railway Co., is quoted as saying that three miles of 52-pound rails have been bought; proposed line is to be two and one-half miles long, from the Uvalde county courthouse to the Galveston, Harrisburg & San Antonio Railroad. A. R. Smith is reported as saying that construction will begin August 20, and gasoline motors will be used.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Aluminum Plates.—See "Brass Plates."

Bagging.—W. M. Hutchinson, 908 Empire Building, Atlanta, Ga., wants addresses of manufacturers of cotton bagging used in lieu of jute.

Blackboards.—See "Slates."

Boller.—Morrison Machinery & Supply Co., Inc., Hackley Morrison, president, Richmond, Va., wants second-hand locomotive-type boiler from 100 to 150 horse-power.

Boilers, etc.—Kentucky State Board of Control for Charitable Institutions, Albert Scott, president, Frankfort, Ky., will receive bids until August 13 for boilers, engines and generators for Western Kentucky Asylum for Insane at Hopkinsville, Ky., or for repairing of present boilers. Specifications and further information can be obtained from W. A. Stearns, consulting engineer, Louisville, Ky.

Brass Plates.—Wm. Walker Jones, 119 North Person street, Raleigh, N. C., in market for name plates 4x8 inches, of brass, copper or aluminum.

Brick.—Presbyterian College of Florida, Austin H. Jolly, president, Eustis, Fla., wants prices on brick for \$12,000 school and chapel.

Bridge.—Bridge committee, R. H. Buckingham, chairman, Fayetteville, N. C., invites bids for construction of stone or steel bridge to cost from \$2000 to \$3000; H. J. McBuile, City Clerk.

Bridge Construction.—Bryan County Commissioners, J. M. Abbott, chairman, Durant, Okla., will open bids August 20 for furnishing and erecting superstructure of two 130-foot span steel bridges over Blue river, one near Blue, Okla., and other near Bokchito, Okla.; also for constructing concrete foundations and abutments and steel tubular piers for said bridges; bids for abutments and bridges may be submitted together; each bid to be accompanied by certified check for \$50; plans and specifications on file in office of county clerk at Durant.

Bridge Construction.—Wicomico County Commissioners, Salisbury, Md., will open bids August 13 for construction of steel-plate girder drawbridge over Wicomico river at crossing of Main street; specifications on file with clerk in office of County Commissioners; certified check, \$200; H. M. Clark, Roads Engineer, P. O. Box 424; William M. Cooper, president County Commissioners.

Bridge Construction.—Augusta Construction Co. will receive bids at office of G. B. Hazlehurst, chief engineer, Douglas, Ga., until August 13 for construction of substructure and trestle approaches of bridge across Altamaha river, on line of Georgia & Florida Railway, now under construction between Hazlehurst and Vidalia, Ga.; work will comprise founding and building of six concrete piers and about 3000 feet of timber trestle approach. Drawings and specifications can be seen and blank proposal forms obtained at office of Mr. Hazlehurst.

Broom Machinery.—R. P. Johnson, Wythe-

ville, Va., wants broom-manufacturing machinery; second-hand preferred.

Buckets (Elevator).—See "Elevator Buckets."

Buggy Materials.—G. G. Dodge, Kenbridge, Va., wants wheels, axles, spokes, bodies, tops, etc., for buggies.

Cable Railways.—Bids will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until August 31 for furnishing cable railways with grip cars, electric railways with motor cars, traveling cranes, and stone, sand and cement valves. Blanks and general information relating to Circular No. 460 may be obtained at above office or offices of assistant purchasing agents, 24 State street, New York; Custom-house, New Orleans; 1086 North Point street, San Francisco, Cal.; also from U. S. Engineer office in following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Philadelphia, Pittsburg, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville, Mobile and Galveston; Business Men's League, Kansas City; Chamber of Commerce, Quincy, Ill.; and Chamber of Commerce and Board of Trade, Tacoma, Wash.; F. C. Boggs, Captain, Corps of Engineers, U. S. A., General Purchasing Officer.

Car Wheels.—Schneider & Stegall Lumber Co., Newport, Ark., in the market for tram-car wheels.

Cement.—Presbyterian College of Florida, Austin H. Jolly, president, Eustis, Fla., wants prices on cement for \$12,000 school and chapel. (See "Schools.")

Chemical Products.—See "Inks, etc."

Communion Outfits.—A. R. Rosenberger, Stoneleigh Inn, Harrisonburg, Va., wants addresses of manufacturers of or dealers in individual communion outfits.

Conduit.—Capt. H. L. Pettus, Quartermaster, Walter Reed Army General Hospital, Takoma Substation, Washington, D. C., will receive bids until August 15 to install about 1100 linear feet four-way electric conduit, with necessary manholes, etc., at Walter Reed Army General Hospital; plans, specifications and further information furnished on application.

Copper Plates.—See "Brass Plates."

Cotton Bagging.—See "Bagging."

Cutting Machines.—See "Meat Cutters."

Dam Construction.—Town Council, Front Royal, Va., will open bids August 18 for construction of concrete dam 200 feet long and 10 feet high on Shenandoah river. Specifications may be obtained from W. J. Kendrick, Recorder.

Drill Presses.—F. C. Murphy, 300 North 19th street, Richmond, Va., wants radial drill presses with three or four-foot arms; second-hand.

Electrical Machinery.—T. Murphy Iron Works, Jacksonville, Fla., wants catalogues of motors and dynamos.

Electric Conduits and Wiring.—Contract will be awarded September 30 for electric conduits and wiring, plumbing, gaspiping and heating for U. S. postoffice and courthouse at Cape Girardeau, Mo.; James Knox Taylor, Supervising Architect, Treasury Department, Washington, D. C. (See "Government and State Buildings.")

Electric-light Plant.—See "Water-works."

Elevator.—Birmingham Realty Co., Birmingham, Ala., wants prices on freight elevator; capacity 3000 pounds, 50 feet per minute.

Elevator.—H. P. Dyches, Aiken, S. C., wants hand elevator.

Elevator Buckets.—Donigan & Barret, Louisville, Ky., in market for Hayward orange-peel bucket of one-half yard capacity, and one of five-eighths yard capacity; second-hand.

Elevators.—T. Murphy Iron Works, Jacksonville, Fla., wants catalogues of hand-power and belt-driven elevators.

Engine.—Morrison Machinery & Supply Co., Inc., Hackley Morrison, president, Richmond, Va., wants 16x36-inch or 18x36-inch Corliss engine.

Engine.—Lancaster Cotton Oil Co., Lancaster, S. C., wants 80 to 100-horse-power automatic center-crank engine; invites full description in first letter.

Engines and Generators.—See "Boilers, etc."

Felts.—See "Inks, etc."

Gas Plant.—F. R. Ellenor, Whaleyville, Va., wants information and prices on plant to manufacture gas for lighting and cooking.

Glass.—Presbyterian College of Florida, Austin H. Jolly, president, Eustis, Fla., wants prices on glass for \$12,000 school and chapel.

Glass Tubes.—T. J. Appleyard, Jr., Lake City, Fla., wants 8 or 10 glass tubes three feet long and three inches in diameter; made of thick glass.

Grinder.—Aripeka Saw Mills, Flifay, Fla., wants grinder for corn and oats; capacity for 100 head of stock.

Hardware.—See "Leather, etc."

Heating and Ventilating Equipment.—Contract will be let August 15 for heating and ventilating of administration building and other structures to be erected on Reservation No. 13, Washington, D. C.; Henry B. F. Macfarland, Henry L. West and Jay J. Morrow, Commissioners District of Columbia. (See "Government and State Buildings.")

Heating Apparatus.—See "Lighting Fixtures."

Heating Apparatus.—See "Electric Conduits and Wiring."

Heating Equipment.—College of Physicians and Surgeons, W. A. Snodgrass, M.D., secretary, Little Rock, Ark., wants prices on hot-water equipment for heating.

Heating Plant.—Board of School Trustees, B. F. Thomas, president, Grenada, Miss., invites bids for installing water-heating system in school building; plans and specifications on file.

Heating Plant.—Department of the Interior, Frank Pierce, acting Secretary, Washington, D. C., will advertise at once plans and specifications for enlargement and extension of heating plant at Freedman's Hospital, so as to supply heat to all buildings of Howard University; expenditure about \$15,000.

Heating Plant.—Charleston, Miss., will award contract September 1 for heating and plumbing of school building to be erected according to plans by P. J. Krouse, architect; J. W. Saunders, Mayor. (See "Schools.")

Heating Plants.—A. E. Brownell, Asheville, N. C., in market for three steam-heating plants; two for coal fuel and one for wood fuel.

Hoisting Drum.—J. W. Marshall, West Point, Va., wants friction-clutch hoisting drum with bull wheel and pinion, to connect with engine.

Hydraulic Rams.—Geo. E. Hursh, Normanock, N. J., wants to correspond with manufacturers of hydraulic rams.

Inks, etc.—Trust Mecanografico, 11 Horaleza, Madrid, Spain, wants addresses of American manufacturers of aniline inks, felts and chemical products.

Leather.—Emil Grube & Co., Cremon 11-12, Hamburg, Germany, want to represent manufacturers of upper and sole leather.

Leather, etc.—Nicolas T. Karameros, Rue Aristotile 15, Athens, Greece, wants to represent American manufacturers of leather, oleo oil, cloth, rubber overshoes, hardware and newspaper paper.

Lighting Fixtures.—M. E. Church South, Ensley, Ala., will award contract August 10 for lighting and steam-heating fixtures for edifice; W. B. Bridge, chairman building committee. (See "Churches.")

Locomotive.—Memphis, Paris & Gulf Railway Co., C. W. Dodson, purchasing agent, Nashville, Ark., wants mogul-type locomotive, 40 to 44-inch wheel centers; 20 to 30-ton; for freight and passenger service; second-hand in good condition.

Lumber.—Bids will be received at U. S. Engineer office, Charleston, S. C., until September 5 for furnishing creosoted lumber and rubble stone; information on application; E. M. Adams, Captain, Engineers.

Machine-shop Equipment.—T. J. Taylor, Martin, Tenn., wants information on equipment for manufacturing brick machinery.

Machine Tools.—See "Twist Drills."

Machine Tools.—See "Drill Press" and "Shaper."

Oils.—Bart. Correa, Vico del Conservatori del Mare, N-9-7, Genoa, Italy, wants to correspond with American manufacturers of cotton and fish oils.

Oils.—See "Leather, etc."

Paper.—See "Leather, etc."

Paving Materials.—See "Stone."

Plaster Ornaments.—Transue & Abshire, contractors, New Decatur, Ala., want quotations and catalogues for plaster ornaments for brick church building costing \$15,725.

Plumbing.—See "Heating Plant."

Rails.—Sabel Bros., Jacksonville, Fla., want to correspond with manufacturers of re-rolled rails.

Reservoir Construction.—Board of Aldermen, Clarksdale, Miss., will open bids August 24 for constructing 250,000-gallon reservoir; reinforced concrete; connected to four-valve or Corliss engine. For specifications address

Walter G. Kirkpatrick, engineer, Jackson, Miss.

Meat Cutters.—J. B. Th. de Logie, Boulevard Marseille, France, wants addresses of manufacturers of machines for cutting meats.

Metal Ceilings.—Presbyterian College of Florida, Austin H. Jolly, president, Eustis, Fla., wants prices on metal ceiling for \$12,000 school and chapel.

Paving.—Mrs. J. C. Hardy, chairman West End Sidewalk Committee, Columbia, Tenn., invites bids for building one mile of concrete pavement five feet wide from corporation line to Columbia Military Academy.

Paving.—Board of Public Works, H. F. Van Dusen, chairman, Chattanooga, Tenn., will open bids August 7 for cement sidewalks and curbing around First District School on McCallie avenue, Douglas and Oak streets; also for cement sidewalks on Boyce and Market streets; certified check, \$250.

Paving.—Baltimore (Md.) Board of Awards, care of J. Sewell Thomas, City Register, will receive bids until August 12 to grade, curb, gutter and pave with bitulithic, sheet asphalt, asphalt blocks or vitrified brick 7th street from North avenue to Clifton avenue; 8th street from North avenue to Clifton avenue; Clifton avenue from 8th street to Slingluff avenue; Walbrook avenue from 9th street to Slingluff avenue; James H. Smith, president Commissioners for Opening Streets, City Hall Annex (Hoen Building); Eugene F. Rodgers, clerk to Board.

Paving.—Board of Paving Commissioners, E. L. Matlock, secretary, Van Buren, Ark., will open bids August 10 for furnishing material and labor for grading and paving Main street, parts of East Main street, Cane Hill street and Fayetteville street with brick; work comprises about 10,000 square yards double brick pavement upon sand foundation; 4218 cubic yards of excavation; 420 linear feet of castings for street crossings; 190 linear feet of cement curbing; 420 linear feet of cement curb and gutter; samples of at least six brick to be deposited with engineer 10 days before letting of contract; plans and specifications on file at office of E. L. Matlock, secretary of Board, at Van Buren, or of T. A. Bayley, engineer in charge, Fort Smith, Ark., where all information can be obtained.

Paving Materials.—Baltimore (Md.) Board of Awards, care of J. Sewell Thomas, City Register, will receive bids until August 12 for bituminous filler and for filler and concrete gravel for paving of Light street from Pratt to Lee streets. Specifications and blank proposal sheets can be obtained from Department of Public Improvements, sub-department of B. T. Fendall, City Engineer. Bids will be received for each kind of material above specified where bidder cannot furnish all materials named.

Pier Construction.—Baltimore (Md.) Board of Awards will receive bids at office of J. Sewell Thomas, City Register, City Hall, until August 12 for construction of two pile and timber piers, known as piers 7 and 8; certified check, \$500; O. F. Lackey, Harbor Engineer; J. Barry Mahool, president Board of Awards.

Pipe.—See "Plumbing Supplies."

Piping.—See "Water Heater, etc."

Plumbing and Gaspiping.—See "Electric Conduits and Wiring."

Plumbing Supplies.—W. C. Smith, Jefferson, Ga., in market for plumbing material, and wants names and addresses of Southern manufacturers or dealers in wrought-iron pipe and plumbing supplies.

Plumbing and Gaspiping.—Contract will be awarded September 14 for plumbing and gaspiping of U. S. postoffice at St. Louis, Mo.; James Knox Taylor, Supervising Architect, Treasury Department, Washington, D. C. (See "Government and State Buildings.")

Pumps.—See "Water Heater, etc."

Rails.—A. G. Garbutt Lumber Co., Staten-ville, Ga., wants prices on 100 tons 50-pound section steel rails, with splices and bolts, for prompt shipment; f. o. b. Haylow, Ga.

Rails.—J. W. Marshall, West Point, Va., wants 500 feet of light T-rails; new or second-hand.

Road Improvements.—Capt. D. W. Hand, Constructing Quartermaster, Fort Barrancas, Fla., will receive bids until August 24 for material and labor required in constructing and repairing macadam wagon roads; information on application.

Road Rollers.—A. G. Kiser, Tazewell, Va., wants prices on 10 or 12-ton steam rollers, new and second-hand, with spike attachment for digging up old macadam.

Roofing.—Presbyterian College of Florida, Austin H. Jolly, president, Eustis, Fla.,

[Continued on Page 71.]

PROPOSALS INVITED FOR CONSTRUCTION WORK.

Details regarding construction work, proposals invited, etc., noted in the following list, will be found in this and recent issues of the MANUFACTURERS' RECORD and the DAILY BULLETIN OF THE MANUFACTURERS' RECORD.

* Indicates that the item has appeared in our "Machinery, Proposals and Supplies Wanted" department.

Date to open bids.
(When date is
not given it has
not been fixed.)

BRIDGES, CULVERTS, VIADUCTS.

		Published in— Daily Bulletin Record.
Toll Bridge, Farmers, Ky.....	June 26	July 2
19 Bridges, Chickasha, Okla.....	July 13	July 16
Concrete Culvert, Pine Bluff, Ark.....	July 13	July 16
*Steel Bridge, Tilden, Texas.....	July 27	July 30
*County Commissioners, Durant, Okla.....	July 30	Aug. 6
*Fayetteville, N. C.....	July 30	Aug. 6
*Douglas, Ga.....	Aug. 1	Aug. 6
*Salisbury, Md.....	Aug. 1	Aug. 6

ELECTRIC PLANTS.

*Electric-light Plant, Burkesville, Ky.....	June 26	July 2
*Electric-light System, Washington, D. C.....	June 27	July 2
*Ashburn, Ga.....	July 31	Aug. 6
Russellville, Ala.....	July 31	Aug. 6

MISCELLANEOUS CONSTRUCTION WORK.

Torpedo Ships, Charleston, S. C.....	July 2	July 9
*Electric Conduits and Wiring, Washington, D. C.....	July 3	July 9
*Electric Wiring, etc., Petersburg, Va.....	July 13	July 16
*Cableways, Isthmian Canal Commission.....	July 10	July 16
*Heating Apparatus, Manning, S. C.....	July 9	July 16
*Electric Conduits, Wiring, etc., Little Rock, Ark.....	July 14	July 16
*Dams, Mississippi River, New Orleans, La.....	July 17	July 23
*Dam Abutment, Wheeling, W. Va.....	July 23	July 30
*Concrete Chimney, Dallas, Texas.....	July 29	July 30
*Lovee, New Orleans, La.....	July 28	July 30
*Heating Plant, Washington, D. C.....	July 30	Aug. 6
*Pile and Timber Piers, Baltimore, Md.....	July 31	Aug. 6
*Heating Plant, Grenada, Miss.....	Aug. 3	Aug. 6
*Concrete Dam, Front Royal, Va.....	Aug. 5	Aug. 6

ROAD AND STREET IMPROVEMENTS.

Concrete Sidewalk, Batesville, Miss.....	July 2	July 2
Granitoid, Louisville, Ky.....	June 29	July 2
Granite Blocks, Richmond, Va.....	July 1	July 2
Concrete Sidewalks, Ruston, La.....	June 26	July 2
Paving and Sewers, Guyandotte, W. Va.....	July 13	July 16
Paving, Beaumont, Texas.....	July 14	July 16
24 Miles Road, Boynton, Va.....	July 16	July 23
*13 Miles Road, Clinton, Tenn.....	July 18	July 23
Cement Sidewalks, Tusculumbia, Ala.....	July 22	July 23
*Granite Blocks, Spartanburg, S. C.....	July 22	July 23
Grade, Asphalt, etc., Memphis, Tenn.....	July 22	July 23
Concrete Paving, Henderson, Ky.....	July 21	July 23
*Street Improvements, Fayetteville, N. C.....	July 24	July 30
*Hot Springs, Ark.....	July 29	July 30
*Road, Jacksboro, Tenn.....	July 28	July 30
*One Mile Concrete Pavement, Columbia, Tenn.....	Aug. 1	Aug. 6
*Grading, Paving, etc., Van Buren, Ark.....	Aug. 1	Aug. 6
*Grading, Paving, etc., Baltimore, Md.....	Aug. 3	Aug. 6
*Cement Walks, etc., Chattanooga, Tenn.....	Aug. 3	Aug. 6
*Macadam, Fort Barrancas, Fla.....	Aug. 3	Aug. 6
*Street Paving, San Antonio, Texas.....	Aug. 5	Aug. 6

SEWER CONSTRUCTION.

Two Miles Mains, Winston-Salem, N. C.....	June 27	July 2
Sewers and Paving, Guyandotte, W. Va.....	July 13	July 16
System, Fitzgerald, Ga.....	July 14	July 16
Toccoa, Ga.....	July 15	July 16
*Sewer Laterals, Muskogee, Okla.....	July 27	July 30
*Sewer, Part of Comprehensive System, Louisville, Ky.....	July 23	July 30
*Sewer, Part of Comprehensive System, Louisville, Ky.....	July 23	July 30
System for School, Taylor, Texas.....	July 23	July 30
Sewer System, Newton, Miss.....	July 28	July 30
House Sewers, Vicksburg, Miss.....	July 28	July 30
*Pipe Sewers, Washington, D. C.....	July 31	Aug. 6

WATER-WORKS.

Extension Mains, Fitzgerald, Ga.....	July 14	July 16
System for School, Conway, Ark.....	July 22	July 23
*Richlands, Va.....	July 23	July 30
*De Funik Springs, Fla.....	July 30	Aug. 6
*Ashburn, Ga.....	July 31	Aug. 6
Russellville, Ala.....	July 31	Aug. 6
*Fort Barrancas, Fla.....	Aug. 3	Aug. 6
*Clarksdale, Miss.....	Aug. 4	Aug. 6

BANK AND OFFICE BUILDINGS.

Granade & Granade, Chatham, Ala.....	June 19	June 25
Empire Construction Co., Birmingham, Ala., \$350,000.....	July 2	July 9
People's Bank & Trust Co., Selma, Ala.....	July 16	July 23
National City Bank, Birmingham, Ala.....	July 28	July 30
*Farmers' State Bank, Granger, Texas.....	Aug. 5	Aug. 6

CHURCHES.

Chattanooga, Tenn., \$12,000.....	June 18	June 25
Mobile, Ala., \$78,000.....	June 18	June 25
First Baptist Church, Paris, Ky.....	July 13	July 16
Stamford, Texas.....	July 29	July 30
San Antonio, Texas.....	July 29	July 30
Bishopville, S. C., \$15,000.....	July 30	Aug. 6
Ensley, Ala., \$35,000.....	Aug. 3	Aug. 6
Washington, D. C., \$50,000.....	Aug. 3	Aug. 6

COURTHOUSES.

Houston, Texas, \$500,000.....	June 18	June 18
Martinsburg, W. Va.....	July 15	July 16
Tusculumbia, Ala.....	July 20	July 23
Salem, Va., \$50,000.....	July 31	Aug. 6

Date to open bids.
(When date is
not given it has
not been fixed.)

GOVERNMENT AND STATE BUILDINGS.

Aug. 19	U. S. Postoffice, etc., Extension, Petersburg, Va.....	July 13	July 16
Aug. 25	Library Addition, Richmond, Va.....	July 16	July 23
Aug. 26	Power-houses, Wheeling, W. Va.....	July 31	Aug. 6
Sept. 30	U. S. Postoffice, etc., Cape Girardeau, Mo.....	Aug. 1	Aug. 6
Sept. 14	U. S. Postoffice, St. Louis, Mo.....	Aug. 3	Aug. 6
Aug. 15	Administration Building, etc., Washington, D. C.....	Aug. 4	Aug. 6

HOTELS.

Pensacola (Fla.) Hotel Co., \$275,000.....	June 30	June 25
Port Arthur (Texas) Hotel Co., \$125,000.....	Aug. 1	Aug. 6

MISCELLANEOUS STRUCTURES.

Masonic Temple, Brewton, Ala.....	June 29	July 2
Jail, Accomac, Va.....	July 23	July 30
Jail, Cedartown, Ga.....	Aug. 3	Aug. 6
Pecos (Texas) Mercantile Co.....	Aug. 4	Aug. 6

MUNICIPAL BUILDINGS.

City Market, Beaumont, Texas.....	July 14	July 16
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SCHOOLS.

Attalla, Ala.....	June 29	July 2
Fort Worth, Texas.....	July 11	July 16
Manning, S. C.....	July 9	July 16
Langston, Okla. (plans, not bids).....	July 14	July 16
Wise, Va.....	July 17	July 23
Two Buildings, Radford, Va.....	July 22	July 23
Plans, not bids, Natchez, Miss.....	July 27	July 30
Chemical Laboratory, Baton Rouge, La.....	July 25	July 30
Richmond, Ky.....	July 23	July 30
Crawfordville, Ga.....	July 29	July 30
Bessemer, Ala.....	July 29	July 30
Crawfordville, Ga.....	July 30	Aug. 6
De Funik Springs, Fla.....	July 30	Aug. 6
Lynchburg, Va.....	July 31	Aug. 6
Montevallo, Ala.....	July 31	Aug. 6
Baton Rouge, La.....	Aug. 1	Aug. 6
New Martinsville, W. Va.....	Aug. 3	Aug. 6
Charleston, Miss.....	Aug. 4	Aug. 6
Lynchburg, Va.....	Aug. 4	Aug. 6
Russellville, Ala.....	Aug. 4	Aug. 6

WAREHOUSES.

Childersburg, Ala. (Cotton).....	June 26	July 2
Pensacola, Fla.....	Aug. 4	Aug. 6

[Continued from Page 70.]

wants prices on metal and tile roofing for \$12,000 school and chapel.

Rubber Shoes.—See "Leather, etc."

Scales.—J. B. Th. de Logie, Boulevard Pons 6, Marseille, France, wants addresses of manufacturers of Dayton automatic scales.

School Supplies.—See "Slate."

Sewer Construction.—Bids will be received at office of Commissioners District of Columbia (Henry B. F. Macfarland, Henry L. West and Jay J. Morrow), Washington, D. C., until August 17 for constructing pipe sewers in District. Forms, specifications and information may be obtained from chief clerk, engineer department, Room 427 District Building.

Sewing Machines.—M. L. Smith, 106 North Mulberry street, Hagerstown, Md., in market for sewing machines.

Shaper.—F. C. Murphy, 309 North 19th street, Richmond, Va., wants 10 or 12-inch shaper; second-hand.

Slate.—Tazewell Planing Mills, J. T. Heldreth, manager, Tazewell, Va., wants addresses of firms dealing in slate suitable for blackboards in school building.

Soap-making Materials.—Bart. Correa, Vico del Conservatori del Mare, N-9-7, Genova, Italy, wants to correspond with American manufacturers of bone grease, tallows, etc., for soap-making.

Stone.—See "Lumber."

Stone.—City Council, Spartanburg, S. C., will open bids August 10 for 50 cars crushed stone, run of crusher, and for 350,000 granite paving blocks 5 to 12 inches long, 4½ to 4½ inches wide and 6 to 7 inches deep, to show clean quarry fracture; J. F. Floyd, Mayor; Fred L. Bryant, City Engineer.

Trestle and Tank.—Capt. D. W. Hand, Constructing Quartermaster, Fort Barrancas, Fla., will receive bids until August 29 for material and labor required in constructing steel trestle and water tank, or for moving and rebuilding old trestle and constructing new tank; information on application.

Twist Drills.—Guevara y Compania, Plaza de Albia No. 1, Bilbao, Spain, wants addresses of manufacturers of twist drills.

Ventilating Apparatus.—See "Heating and Ventilating Equipment."

Water-works.—See "Reservoir Construction."

Water-works.—Mayor and City Council, Ashburn, Ga., will receive bids until August 12 for construction of water-works and electric-light plant according to plans and specifications on file in office of John J. Story, City Clerk, Ashburn, and of J. B. McCrary &

Co., engineers, Atlanta, Ga.; certified check, \$500.

Water Heater, etc.—Board of Public Works, Robert W. Goodnow, secretary, Kansas City, Mo., will open bids August 11 for installing feed-water heater, pumps, piping, etc., at city hall; certified check, 10 per cent. of bid; plans and specifications on file at office of Board.

Water Tank.—See "Trestle and Tank."

Water-works.—William W. Flournoy, Mayor, DeFunik Springs, Fla., will open bids August 14 for constructing water-works; proposal sheets furnished by town. Plant will consist of elevated tank with maximum head of 135 feet, 75,000 gallons capacity; one duplex steam pump, 500 gallons per minute capacity; one 60-horse-power boiler; approximately three miles of mains, 4 to 10 inches in diameter; deep-well pump, 31 fire hydrants, valves and valve boxes, etc. Proposals will be received for furnishing material and constructing water-works, town to furnish material; for whole work or any of subdivisions as shown by specifications; certified check, 3 per cent. of bid; bond, 25 per cent. of contract price; plans and specifications on file at office of Mr. Flournoy at DeFunik Springs; of Solomon-Norcross Company, engineers, 1622-23 Candler Building, Atlanta, Ga. Bidders may obtain same by enclosing check for \$10, payable to engineers.

Well Drilling.—Gulfport Oil, Gas & Mineral Co., Box 65, Gulfport, Miss., is receiving bids for drilling test well to depth of 2500 or 3000 feet, stating price per foot; contractor to furnish all material.

Woodworking Machinery.—Corinth Engine and Boiler Works, Corinth, Miss., in market for combination planer, matcher and molder; second-hand, good condition; full details in first letter.

Woodenware Machinery.—James Zeigler, Carthage, N. C., wants information on manufacture of water buckets and prices on machinery required.

Stevens Rifles and Telescopes Win.

The Stevens rifles and telescopes won the leading prizes at the annual shoot of the New England Schutzen Bund at Westville, Conn., on July 21 and 22. One, two, three order was the Stevens performance on ring target. First and second prizes were secured by the Stevens on honor target. F. C. Ross made 67 points out of a possible 75 on honor target, defeating over 50 marksmen. He uses the Stevens rifle and telescope, manufactured by the J. Stevens Arms & Tool Co., Chicopee Falls, Mass.

INDUSTRIAL NEWS OF INTEREST

A Salesman Wanted.

An opportunity for an active salesman is offered by the Ulmer Leather Co. of Norwich, Conn. This company wants to engage a representative to offer its leather belting. Prompt applications are requested.

For Steel-Frame Buildings.

The Wm. B. Scafe & Sons Company, Pittsburg, Pa., has received contract for the steel-frame buildings required for the extension to the plant of the Driggs-Seabury Ordnance Corporation at Sharon, Pa.

Hammond-Byrd Company Secures Agency.

The Hammond-Byrd Company, Brown-Marx Building, Birmingham, Ala., has been appointed agent for the sale of the output of the Western Steel Car & Foundry Co.'s rolling mill at Anniston, Ala.

Oil Mill for Sale.

An opportunity to buy a Southern cotton-oil mill is seen in the announcement that the Starr (S. C.) Oil Mill Co.'s plant is to be offered at public outcry on August 25. The plant is fully equipped with machinery and ready to operate. A. S. Bowie, Starr, S. C., can be addressed for particulars.

The Gunther-Wright Plant at Owensboro.

One of the leading plants of its section of the South is that of the Gunther-Wright Machine Co., Owensboro, Ky. This company has found business conditions favorable during recent months, and its plant has been operating continuously in order to meet demands. The company's product includes the Gunther engine governor.

Incandescent Lamps Made in Kentucky.

So far in 1908 it has been found that the demand for the Kentucky Electrical Co.'s incandescent lamps has been greater than during the same period of 1907. Indications are that the market will be much improved during the early fall. The Kentucky Electrical Co. has its plant at Owensboro, Ky., and is possibly the only incandescent-lamp manufacturer south of the Ohio river.

Southern-Built Stone Machinery.

Stone machinery built in the South is being largely used by the operators of quarries and other stone-working plants. Prominent as a manufacturer of such equipment is the New Albany Manufacturing Co., New Albany, Ind. This company reports trade as improving, and it expects conditions to steadily improve during the balance of the year. It has received orders recently from the well-known Bedford-stone district, one mill having contracted for a planer, crane and wire gang saw. The latter is claimed to be an improvement over the blade saw and the adaptation of it in the form of gangs to be a further advance in stone-working machinery.

Referring to Jos. E. Bowen's Facilities

There are continued demands for railway equipments and supplies and contractors' equipments, and consequently both manufacturers of and dealers in those classes of products are expecting an increased activity in all industrial fields. The Southern trade is being met by progressive dealers, among whom is Jos. E. Bowen, Bank of Commerce Building, Norfolk, Va. He has ample facilities for prompt shipments of locomotives, cars, rails, steam shovels, contractors' plants and other similar mechanical equipment. Mr. Bowen also has customers in the North, and in that section recently sold two large new Vulcan locomotives, built by the Vulcan Iron Works of Wilkes-Barre, Pa.

Sales of Small Curtis Turbines.

The increasing use of small Curtis steam turbines is shown by an inspection of a partial list of turbines under 500-kilowatt capacity which have been installed by the General Electric Co. of Schenectady, N. Y., or are under construction. Of the 570-odd turbines listed (total capacity about 37,000 kilowatts) 7 per cent. are for export trade. The remainder are for domestic service in central stations, marine work, laboratories of educational institutions, power and lighting plants for hotels and office buildings, laundries, mines, printing establishments and in various branches of manufacturing. It is interesting to note the widely different industries in which small Curtis steam turbines are used. In the list are woodworking plants, ice plants, textile mills, breweries, tanneries, flour mills, shoe factories, paper mills, foundries, iron and steel mills, distil-

leries, chemical plants, machine shops, textile mills and ammunition factories. It is also interesting to note that leading railroads are using turbines for train illumination. The latest application of moderate size Curtis turbines is for driving fire pumps. On ships, where a compact generating unit is required, small turbine lighting sets are also coming into favor.

To Develop Water-Power Without a Dam.

A patent has been issued on a water-wheel or turbine designed to develop power in an open current without a dam. This turbine operates horizontally and is submerged, therefore not being affected by the rising or falling of the stream. It is understood that the new water-wheel is especially adapted for pumping without gearing, and that it can be built at a small cost compared with its strength, durability and efficiency. The specification of letters patent is dated July 21, 1908, and has been issued to Robert A. Fontaine of Fontaine, Va., who is secretary and treasurer of Williamson, Hedgecock & Fontaine, Inc., operating a brick plant at Fontaine, and have main offices at Martinsville, Va.

Hicks Motor & Manufacturing Co.

The Hicks Motor & Manufacturing Co. has been organized to take over the Hicks Motor Co., a partnership which existed to manufacture gasoline engines for marine and stationary work. This firm's business having increased to where it became necessary for them to secure more capital, the Hicks Motor & Manufacturing Co. was formed and has a capital of \$25,000. Wm. B. Elliott is president; Harry E. Hicks, vice-president and general manager, and A. B. Craft, secretary and treasurer. Offices and plant at Garwood, N. J. The company will not manufacture dynamos and motors, but engines for stationary and marine purposes. The type of engine was designed by Harry E. Hicks, who has had several years' experience with this class of machinery.

Central Metal & Supply Co.

The Central Metal & Supply Co., 609-11 East Lombard street, Baltimore, Md., is Southern headquarters for brass and copper goods, and also an extensive jobber of pipefittings and valves and plumbers' supplies. It formerly erected and occupied a four-story 45x90-foot warehouse, and last year was forced to erect a three-story building 40x60 as an annex. This enterprise was established nine years ago, and has been constantly growing since that time. Notwithstanding so many complaints about business, June was the banner month in the Central company's history. Besides having a very large local trade, the company is developing its Southern business and becoming well known in that section. Southern manufacturers and dealers who need products of the class handled by the Central Metal & Supply Co. will find it advantageous to write for specifications and prices.

Water-Cooled Power Transformers.

An initial shipment of water-cooled power transformers, forming part of an ultimate equipment of 36 transformers, aggregating 10,530 kilowatts, for the U. S. Reclamation Service in connection with the Salt River (Ariz.) irrigation project, has recently been made by the Wagner Electric Manufacturing Co. of St. Louis, Mo. The specifications were issued last July, and the contract was awarded to the Wagner company under severe requirements as to insulation, operating characteristics, etc., and under rigid stipulations as to prompt delivery. The recent shipment comprises nine 235-kilowatt 25-cycle 23,100-1100-volt step-down transformers, and six 350-kilowatt 25-cycle 2300-26,000-volt step-up transformers. The design of the transformers required dealing with certain special conditions at the places of installation, among which were the limited space for handling the transformers in the powerhouse, and the high temperature of the cooling water, due to the hot climate of the desert region. The water is circulated through the cooling coil of each transformer by a Wagner three-phase motor-driven triplex pump.

Central Foundry & Machine Co.

An interesting announcement in the machinery industry is that Wilkes McClave (formerly of McClave, Rimmer & Co., 90 West street, New York) has organized the Central Foundry & Machine Co. to succeed the High Point Machine Co., which enterprise, with its complete modern plant, patterns and good-will, Mr. McClave has purchased. The new company has a capital

stock of \$50,000, and with Mr. McClave in control intends to be especially active in meeting the demands of the South for various kinds of mechanical equipment and supplies. The plant is equipped for manufacturing steam engines, sawmills, lath mills, box machinery, shingle machinery, bobbin lathes, centrifugal pumps, pulleys, hangers, etc., and besides will hold in stock a general line of mill and factory supplies for prompt shipment. This enterprise has been in existence for 20 years, first as the High Point Machine Works and later as the High Point Machine Co. E. W. McClave is president and Wilkes McClave secretary-treasurer of the Central Foundry & Machine Co. Illustrated and descriptive literature of the company's products is now ready.

A Vacuum Cotton-Picking Machine.

John S. Thurman, president of the General Compressed Air & Vacuum Machinery Co., 421 Olive street, St. Louis, Mo., has invented a vacuum cotton-picking machine and formed the Vacuum Cotton Picking Machine Co. to manufacture and introduce it. The Thurman system of gathering cotton consists of the application of practically the same principle as is used in the house-cleaning device, and the equipment is to be demonstrated in Southern cotton fields during the coming season. The new equipment is described as follows: "A motor driven by gasoline is mounted on a wide-wheeled truck. This engine produces a vacuum in a tank connecting with a receptacle for the gathered cotton. Two or more lines of hose, each 100 feet long, connect with the cotton tank. At the end of each hose is a specially constructed and patented nozzle, controlled by the operator. This nozzle, placed near the opened boll of cotton, draws the cotton into the hose and deposits it in a receptacle on the wagon. The boll is cleaned of every fiber of cotton and the vacuum is so delicately adjusted that it will draw into the receptacle only the clean cotton, with no leaves or trash. A strip 300 feet wide, 100 feet each side of the wagon, can be gathered with the machine. Two horses or mules can draw the machine over the field, and any man or boy can operate the engine. The hose is so adjusted that if dropped from the operator's hand no dirt will be drawn in. The cotton on the tallest and shortest plants is gathered. When the receptacle of the machine is full it is emptied readily into sacks or on a tarpaulin. Two men will gather 1000 pounds of cotton in a day, working 10 hours."

What the Name "Albany" Means.

Forty years ago Adam Cook established the Albany Lubricating Compound & Cup Co. in Albany, N. Y., manufacturing "Albany Grease" and specialties in oils and lubricating devices, and now for 17 years these products have been solely made by Adam Cook's Sons of New York, the firm being composed of the sons of Adam Cook, the originator of "Albany Grease." The Messrs. Cook's Sons say: "The name 'Albany' on lubricants means that the article is above the common and that the highest skill known has been employed in the making. It means also that years of experience have served to perfect it. We now occupy two large buildings at 313 West street and 520 Washington street, New York, having increased output and capacity tremendously since the founder started business in the Albany hole-in-the-wall, at that time supplying a local trade only, while the demand today for 'Albany' specialties is worldwide. The 'Albany' products are pure and adapted to all kinds of machinery in all climates, and are always correctly branded. The trade-mark and the word 'Albany' insures this, and these are registered in all countries. Every engineer associates them with the first lubricating grease ever put upon the market, and it still remains to him the first in every respect—in lubricating qualities, in economy and cleanliness, in its certainty to keep an engineer out of hot-box troubles, and all along the line in its lasting qualities." Adam Cook's Sons, the only makers of "Albany Grease," attribute the magnitude of their business to the great care that has continually been given the manufacture of their product, and in a great measure also to persistent advertising.

TRADE LITERATURE.

Handling Coal and Ores.

Interesting and valuable information regarding the handling of coal and ore by mechanical equipments is printed in Jeffrey Bulletin No. 25. This publication contains advance pages from catalogues Nos. 29 A and 28, now in press. It tells of the machinery which the Jeffrey Manufacturing Co., Columbus, Ohio, has perfected for handling coal, ore and other materials in the most

efficient and economical manner. Photographic views accompany the descriptions.

The Mechanic.

The Mechanic for August is now being distributed. It illustrates and describes machinery and appliances for working wood and is of general interest. The H. B. Smith Machine Co., Smithville, N. J., is the publisher.

New Fort Wayne Bulletins.

The Fort Wayne Electric Works, Fort Wayne, Ind., has ready for inquirers Bulletin No. 1107, referring to standard alternating-current single-phase switchboard panels, and Bulletin No. 1108, referring to multiphase revolving-field belted generators.

Diehl Electric Fans and Motors.

The Diehl bulletins Nos. 20, 21, 151, 501 and 502 are now being distributed to describe and illustrate the Diehl electric ceiling fans, universal fans, types F and FC motors and generators, small ventilating fans and electric coffee mills. These are the product of that well-known manufacturer, the Diehl Manufacturing Co., Elizabethport, N. J.

Standard Power Presses.

Standard power presses are described in an illustrated booklet issued by the Zeh & Hahnemann Company of Newark, N. J. They are for punching, stamping, cutting, forming and other operations wherein metal is made into workable shapes for manufacturers and dealers. The company named is the manufacturer and invites inquiries for data.

Short Stories About Steel.

Short Stories About Steel No. 4 is now being mailed, and it is an interesting one of the series. It tells the story of Benjamin Huntsman, the inventor of crucible steel, from the first experiments to the perfection of the method and the improvements that have been introduced from time to time by leading manufacturers. The Park Drop Forge Co. of Cleveland, Ohio, issues the booklet in which the story is contained, and besides presents some interesting photographic views and explanations of the heat treatment of steel and the manufacture of drop forgings.

Useful Roofing Information.

Anyone who is considering the roofing proposition should secure the booklet on Amalte which has just been published. This booklet is full of practical information. It gives pointers that will enable you to know what's what in the roofing line. It is published by one of the oldest roofing manufacturers in the country. It is mailed free to anyone sending name and address. A sample of Amalte, with its mineral surface, which has made a success as a lasting protection against the weather, is also sent with the booklet. Address Barrett Manufacturing Co., New York.

Havemeyer Bars for Concrete.

An illustrated pamphlet now current describes the Havemeyer steel bar for concrete. On account of its mechanical bond this bar is said to eliminate danger of failure from this source. It is also claimed that a concrete beam properly reinforced with the Havemeyer bar offers great resistance to horizontal shear and diagonal tension, eliminating danger from this source. The bar named has been designed to meet the requirements necessary without sacrificing metal and to insure the greatest possible economy. It is the product of the Concrete Steel Company, 29 Broadway, New York.

Continuous Concrete Pipe.

The Meriwether system of continuous concrete pipe (reinforced) for sewers, culverts, conduits, etc., is described in an advance bulletin issued by the Lock Joint Pipe Co., 165 Broadway, New York. Several photographic illustrations assist in making the explanation entirely clear. The company has had many years' experience in manufacturing lock-joint pipe for the protection of piles in bridges and wharves against teredo, limboria and other marine wood borers, and this experience has enabled the company to perfect a continuous reinforced concrete pipe for sewers, culverts and conduits.

The Hawkes Boiler.

In a pamphlet published by the Trolay Engineering Co. is presented a full description of the Hawkes boiler, which has features of efficiency, economy, simplicity, etc., worthy of investigation by power users everywhere. The pamphlet has an interesting descriptive text, which is accompanied by photographic views and diagrams elucidating the explanations. For power and heating the Hawkes boiler is offered as having a superiority that will appeal to the

discriminating buyer of mechanical equipment of its class. The Traylor Engineering Co. manufactures the boiler named, also manufactures light and heavy plate work of every description. Its offices are at No. 2 Rector street, New York.

"ABC" Blowers for Railroads.

"ABC" blowers furnish heat during the winter, provide for cooling during the summer and insure pure air the year round. They supply draft to the boiler, blast to the forge or furnace, hot air to the dryer, and are used for exhaust, elevating and conveying systems. The transportation field offers larger opportunities than any other single industry for making use of the machines, and their manufacturer publishes an interesting illustrated book describing representative installations for railroads. These are presented as suggestive of the variety of applications of which the "ABC" apparatus is capable. For copy of the publication address the American Blower Co., Detroit, Mich., manufacturer of "ABC" blowers.

Columbian System of Reinforced Concrete.

A complete description of the Columbian system of reinforced concrete (Columbian ribbed-steel bars for reinforced concrete and the Columbian system of fireproofing) is presented in an illustrated book now being distributed among contractors, architects and others interested in improved building methods. For 12 years the Columbian systems have been used only by the owner of the patents and restricted to contracts taken, and today there are over 50,000,000 square feet of Columbian floors in use throughout the United States and Europe. Owing to the demand for a system that is efficient, economical and easy of erection the Columbian bar has been placed on the market for sale to contractors, architects, owners and others. The Columbian Concrete-Steel Bar Co., Union National Bank Building, Pittsburg, Pa., manufactures the bars and will send copy of the book to applicants.

Oil Derricks Made of Steel.

The rapidly increasing cost of suitable timber for the construction of oil and gas derricks has brought forcibly to the attention of operators the desirability of constructing derricks which can be readily moved from place to place and which may be truly economical. Experience with steel derricks indicate that the same desirable results will attend the use of steel for their construction as has followed the substitution of steel for wood in buildings. The Oil Well Supply Co. of Pittsburg, Pa., has given this subject consideration, and issues an interesting illustrated pamphlet describing steel derricks and their parts which the company has had built by the Carnegie Steel Co., also of Pittsburg, on specifications by Carnegie engineers, following plans supplied by the Oil Well Supply Co. It is stated that the advantages of steel derricks as compared with wood are numerous and very desirable, including strength, durability, portability, etc. Operators are urged to investigate steel construction for derricks.

As to Gas Engines and Producers.

The Weber Gas Engine Co. of Kansas City, Mo., says: "The cost of fuel is an important factor in every power plant, and the modern gas-power plant uses half the coal required for a steam-power equipment. The cost of converting this coal into gas in the suction gas producer has shown a thermal efficiency that is surprising even the advanced engineer. It is converting from 75 to 80 per cent. of the heat values in the fuel into available, clean gas. Furthermore, it is economically utilizing many low-grade fuels, such as lignite and peat, that contain such an excessive amount of moisture, which renders them of little or no value when used under a steam boiler. This important development in the conserving of our natural resources is elaborated in our brochure No. 60, which fully describes the Weber down-draft suction gas producer. We will be glad to send to inquirers a copy of the brochure, also of our illustrated catalogue No. 22, which fully describes the Weber gas engine and up-draft suction gas producer for non-bituminous fuels."

Fueling Equipment of Power-Houses.

"Engineering Practice as Applied to the Fueling Equipment of Power-houses" is the title of a pamphlet reproducing (from the Journal of the Franklin Institute for June) a treatise by Harry P. Cochrane, chief of the estimating department of the Link-Belt Company, Nicetown, Philadelphia, Pa. The treatise is replete with data suggesting the ways and means by which economies can be effected in handling the fuel consumed by power plants, thus promoting that desirable

result, the manufacture of any product with the least expenditure of money, at the same time giving due importance to the reliability of the product. The operating expense account of any plan depends largely upon its mechanical equipment, and one of the important factors in minimizing the cost of power-plant operation is the handling of the fuel by mechanical equipments. Mr. Cochrane's treatise gives especial attention to the use of link-belt conveying apparatus, and presents data which every progressive manager of a power plant should have available for information and reference.

Carborundum.

Carborundum is a manufactured abrasive. It is not found in nature. It is not even an imitation of nature, but is a distinct creation. Carborundum is a chemical combination of two elements, carbon and silicon. It is the trade name given to carbide of silicon, a substance originated by Edward G. Acheson in 1891. It is said to be much harder than any other known abrasive, which gives it great durability. It is made up of small, sharp crystals just brittle enough to break slightly in use. The sharp edges of the crystals cut clean and fast, while the brittleness, by constantly presenting fresh cutting edges, prevents glazing. The combination of these qualities—durability, rapidity and uniform efficiency—makes carborundum in demand as an abrasive. Carborundum manufacture and the various kinds of carborundum wheels, roll grinders, stones, hones, sticks, cloth and many other products for the industrial world are described and illustrated in a book now being distributed by the Carborundum Company, Niagara Falls, N. Y. This company manufactures carborundum and its products.

Degrading Chase for Dollars.

[New York Sun.]

In recent years some unkind things have been said of the Great and General Court of Massachusetts. Not long ago that body wrote itself down lower than its most bilious critic would dare to write it. This was the resolution passed without shame by these abject representatives of a State famous historically, rich and that used to be proud:

"Resolved, That the board of trustees of the Massachusetts Agricultural College are hereby authorized and directed to use their best efforts to secure and accept for the college the benefit of the retiring fund of the Carnegie Foundation for the advancement of teachers."

We are not aware that the Massachusetts Agricultural College is of any particular use to agriculture or Massachusetts. Still that State is amply able to pay the institution's bills and to provide old-age pensions for its professors. And here is where the inexhaustible vanity and money of Carnegie become a public menace and danger, blight public self-respect and turn a prosperous community into a begging letter writer. What's the use of paying even the paltriest mill of tax when Carnegie will provide? For the sake of library buildings town after town has submitted to the humiliation of mendicancy and saddled itself and posterity with debts to build another Carnegie monument.

Now a State, hat in hand, with bated breath and whispering humbleness, asks alms of the great promoter of mendicancy. "Massachusetts, God forgive her, she's a-kneelin'" before "the rest." It is enough to make Faneuil Hall rock itself down and the Unicorn on the Old Statehouse run himself through with his own horn.

It is a pleasure to see the Springfield Republican, which for all its crankiness and divagations has more of the old Massachusetts spirit than any other journal in the State, lambasting mightily this degrading pursuit of eleemosynary dollars. God save the Commonwealth of Massachusetts from being a pensioner in her old age!

Negroes in Durham.

[Durham (N. C.) Sun.]

On Saturday of this week the Mechanics and Farmers' Bank will open its doors in this city for the transaction of a general

banking business. This bank is owned, lock, stock and barrel, by colored people, and begins business with a paid-in capital of \$10,000. Durham will then have the third negro bank in North Carolina.

This is not the only new business that is owned by colored people in Durham, and on Parrish street, where the bank is being made ready to open, there is quite a colony of business industries owned exclusively by colored people, and many thousands of dollars are wrapped up in various enterprises. Few people, even in Durham, know the extent of the negro business in the almost half block of fine business houses that are owned exclusively by one concern.

This is the new bank, a new drug store with authorized capital of \$10,000, a tailoring establishment, finely-equipped barber shop, a nice cafe and the largest negro insurance company in the world. Then in this building there are the offices of four colored physicians, one lawyer, headquarters of the district grand secretary of the Grand United Order of Odd Fellows, and offices of the Royal Knights of King David, where two of the supreme officers look after the business of this fraternal insurance company. It would be a revelation to anyone to visit this section of Parrish street and see the progress that has been made by the negroes and learn that here on this one block in Durham they have invested more than \$100,000 and carry on business enterprises that stretch out over a number of the Southern States.

It is always a pleasure to note progress, and so little is known about the many enterprises carried on in our very midst by a few leading negroes, who have amassed considerable fortunes by hard work and organization, that this story is being written.

Farmers' Union and Cotton.

[New York Journal of Commerce.]

Claiming that the Farmers' Educational and Co-operative Union of America, with hundreds of thousands of members, it is said, has become an important factor in the cotton industry, its European representative, Mr. Maurice Greville, sailed on Saturday to carry on its agency in Liverpool and Manchester.

Mr. Greville has been traveling since May in the cotton-growing States of the South. He has visited the branch organizations of the Cotton Union in each cotton State, inspected the crops, made personal inquiries of the growers and acquainted himself with the actual conditions of the present season's crop.

Interviewed by a representative of the Journal of Commerce and Commercial Bulletin before his departure, Mr. Greville expressed very decided opinions that the objects and worth of the Farmers' Union are as yet comparatively little known and appreciated. The rapid growth of the movement for which the union stands he considers remarkable.

"Beginning little more than two or three years ago," he said, "the union has grown to such strength that it has been able to found a city of its own, and has been instrumental in building cotton storage warehouses, which are a new feature of the Southern cotton States, in connection with the better collection and distribution of the product. Union City, the embodiment of the union's ideas, is 21 miles from Atlanta, Ga. Though only six months old, it has received recognition by having two railway stations given to it, while its postoffice has already a very large mail delivery to handle in proportion to the town's size and recent birth.

"As an instance of the effective practical work of the union, the warehouses built or promoted by the union in the cotton States have very much remedied the

wasteful and disorderly state of things noticeable in the streets of Memphis and in towns and along the roads of the cotton districts, owing to loose packing and insufficient storehouses, the accommodation two years ago being insufficient to such an extent that the cotton lay in the streets unsheltered and liable to deterioration. Now, owing to the union's action, warehouses have been put up in every one of the cotton States. In Arkansas alone there are 86, and in the aggregate they number more than 500, representing an outlay of from \$10,000 to \$50,000 apiece.

"In order to further the interests of its members and that the whole Farmers' Union may be represented as a responsible business organization, a company known as the Farmers' Union Cotton Co. was formed and incorporated at Memphis, Tenn., some 12 months ago to carry out contracts, trade with the domestic and foreign buyers of cotton and all incidental business, such as the collection of information about crops, acreage and the industry generally from its members and agents. This company is officially recognized by the union as its representative.

"The purpose of the union," Mr. Greville was of pains to explain, "is merely one of self-protection for the farmers' interests. The idea is that the farmers should open out a market for themselves. They wish to be independent dispensers of the raw material, not to cut out the middleman, as they are not antagonistic to bona fide traders, but wish to have a say in the price of selling cotton. By growing cotton for spinners direct they hope to check those conditions which have been injurious to the trade arising from gambling in futures."

Panama Contract for New Orleans Firm.

The Isthmian Canal Commission has awarded contract to Oster Bros. of New Orleans, La., to build seven trucks for heavy hauling in connection with the construction of the Panama canal. Various wagon builders of different parts of the country were among the bidders, and it is a tribute to Southern facilities that the trucks will be built in a Southern plant.

The St. Francis Valley Drainage Investigation Association has been organized by representatives of Poinsett, Craighead and Mississippi counties, Arkansas, for the purpose of securing the co-operation of the people of these counties in the reclamation of land within their boundaries.

The shipments from Norfolk, Va., of truck on one day recently included 28,413 barrels of potatoes, 4900 barrels and 645 baskets of cucumbers, 867 baskets of beans, 1723 carriers of tomatoes and 503 barrels of squashes.

The assessed value of property in Texas last year was \$1,635,299,115, an increase over 1906 of \$414,159,809, and it is expected that this year the assessed valuation will be between \$2,125,888,849 and \$2,280,418,761.

FINANCIAL NEWS

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,
Baltimore, Md., August 5.

Business was rather quiet in the Baltimore stock market during the past week, but near the end of the period there was some show of interest and sales were more frequent.

In the trading United Railways common sold from 11¼ to 10½; do. trust certificates, 10½; do. income bonds, 53¾ to 54¼; do. funding 5s, 79¾ to 79¼; do. do. funding scrip, 79½ to 79¼; do. 4s,

87½ to 87¾; United Light & Power 4½s, 92; Consolidated Gas 6s, 102¾; do. 4½s, 93; Seaboard Company common, 7; Seaboard 4s, 57 to 60½; Consolidated Cotton Duck preferred, 25; Mt. Vernon-Woodberry Cotton Duck 5s, 78¾ to 79¼; G. B. S. Brewing 1sts, 44¾ to 46; Seaboard 10-year 5s, 92; do. three-year 5s, 93¾ to 94.

Bank stock sold as follows: Mechanics', 25¾; First National, 125. Fidelity & Deposit was dealt in at 126 to 125½, and Maryland Casualty at 96¼.

Other securities were traded in thus: Baltimore, Sparrows Point & Chesapeake 4½s, 93; Houston Oil common, 8 to 8½; do. preferred, 42½; Northern Central Railway stock, 102½ to 93; Baltimore City 4s, 1954, 104½; Wilmington & Weldon 4s, 95½; Atlantic Coast Line new 4s, certificates, 75; Alabama Consolidated Coal & Iron 5s, 86; Baltimore City 3½s, 1940, 96; Georgia, Carolina & Northern 5s, 101¾ to 101½; Anacostia & Potomac 5s, guaranteed, 101¾ to 102; Maryland Club 4½s, 100½; Western Maryland Railroad stock, 6½ to 7; Florida Southern 4s, 88½ to 88¾; Baltimore City 3½s, 1980, 95; Baltimore Electric 5s, stamped, 87½; Augusta Railway & Electric 5s, 101; Lake Roland Elevated 5s, 115½; Atlantic Coast Line of Connecticut stock, 215 to 220; Georgia Southern & Florida 5s, 103; Southern Railway 5s, 99; Virginia Midland general mortgage 5s, 106; West Virginia Central 6s, 102½; Atlantic Coast Line Railroad stock, 94 to 93½; Georgia Pacific 6s, 110½; Maryland & Pennsylvania incomes, 60 to 60½; Virginia Electric Railway & Development 5s, 97½; Western Maryland 4s, 74; Wilmington, Columbia & Augusta 6s, 103¼.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended August 5, 1908.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast of Conn.	100	218	222
Georgia Southern & Florida.	100	10	19
Norfolk Railway & Light.	100	25	27
Seaboard Co. Com.	100	7	7½
Seaboard Co. 1st Pfd.	100	30	40
Seaboard Co. 2d Pfd.	100	12½	13½
United Rys. & Elec. Co.	100	11	11½
Western Maryland.	50	6¾	7

Bank Stocks.	Par.	Bid.	Asked.
Citizens' National Bank.	100	33	35
Farmers & Mer. Nat'l Bank.	100	40	45
First National Bank.	100	120	130
German Bank.	100	100	100
Mechanics' National Bank.	100	100	100
National Bank of Baltimore.	100	110	120
National Bank of Commerce.	15	25	25
National Union Bank of Md.	100	120	121½
Third National Bank.	100	115	120
Western National Bank.	20	34	34

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
Baltimore Trust & Guar.	100	283	295
Colonial Trust.	50	23	29
Continental Trust.	50	150	150
Fidelity & Deposit.	50	115	150
International Trust.	50	115	150
Maryland Casualty.	25	65½	66½
Merc. Trust & Deposit.	50	120	120
Union Trust.	50	60	60
U. S. Fidelity & Guaranty.	100	115½	115½

Miscellaneous Stocks.	Par.	Bid.	Asked.
Ala. Con. Coal & Iron.	100	28	35
Ala. Con. Coal & Iron Pfd.	100	70	70
Con. Cotton Duck Com.	50	6½	8
Con. Cotton Duck Pfd.	50	24½	26
Con. Gas, Elec. Lt. & P. Com.	100	71½	12½
Con. Gas, Elec. Lt. & P. Pfd.	100	71½	12½
Consolidation Coal.	100	87	90
G. E. S. Brewing Co.	100	3½	5

Railroad Bonds.	Par.	Bid.	Asked.
Albany & Northern 5s, 1945.	100	92½	94
Atlanta & Charlotte Ext. 4½s.	100	99	100
Atlantic Coast Line 1st 4s, 1952.	100	93½	94
Atlantic C. L. 4s, Cfs., 1952.	100	74½	75½
Atlantic C. L. (Conn.) 5s, Cfs.	100	93½	94
Atlantic C. L. (Conn.) 4s, Cfs.	100	72	72
Carolina Central 4s, 1949.	100	80	86
Charlotte, Col. & Aug. 1st 5s, 1910.	100	100	103
Charlotte, Col. & Aug. 7s, 1910.	100	105	110
Coal & Coke Railway 5s.	100	85	85
Coal & Iron Railway 5s, 1920.	100	101	101
Columbia & Green. 1st 6s, 1916.	100	106	107½
Florida Southern 4s, 1940.	100	88	89½
Georgia & Alabama 5s, 1945.	100	98½	99½
Georgia, Car. & North. 1st 5s, 1929.	100	101½	101½
Georgia Pacific 1st 6s, 1922.	100	101	111
Georgia South. & Fla. 1st 5s, 1945.	100	102½	102½
Potomac Valley 1st 5s, 1941.	100	100	100
Raleigh & Augusta 1st 6s, 1926.	100	108½	108½
Richmond & Danville Gold 6s, 1915.	100	106	106
Seaboard Air Line 4s, 1950.	100	91½	95½
Seaboard Air Line 5s, 10-year, 1911.	100	91½	93
Seaboard Air Line 5s, 3-year.	100	93½	95
Seaboard & Roanoke 6s, 1916.	100	100	100
Seaboard & Roanoke 5s, 1926.	100	100	100
South Bond 5s, 1941.	100	101½	102½
Southern Railway Con. 5s, 1941.	100	99½	101
Virginia Midland 3d 6s, 1916.	100	107	108
Virginia Midland 4th, 1921.	100	105	106
Virginia Midland 6th 5s.	100	107	108
Washington Terminal 3½s.	100	90	90½
Western Maryland 4s, 1952.	100	74	75
Western North Car. Con. 6s, 1914.	100	106	106½
West Virginia Cent. 1st 6s, 1911.	100	107½	107½
W. L. Col. & Aug. 6s, 1910.	100	102½	103½
Wilmington & W. Gold 5s, 1935.	100	106½	106½

Street Railway Bonds.

Anacostia & Potomac 5s, 1949.	100	102	102
Atlanta Con. Street Railway 5s.	100	103	104
Augusta Railway & Elec. 5s, 1940.	100	100½	102
Baltimore City Passenger 5s, 1911.	101	101	101
Balto., Spar. Pt. & C. 4½s.	90	91½	91½
Balt. Trac. (N. Balt. Div.) 5s, 1942.	113	113	113
Central Ry. Con. 5s (Balt.), 1932.	109½	109½	109½
Charleston City Ry. 5s, 1923.	100	100	100
Charleston Con. Elec. 5s, 1939.	88	90	90
City & Suburban 5s (Wash.), 1948.	99½	99½	99½
Knoxville Traction 1st 5s, 1928.	102½	102½	102½
Lake Roland Elec. 5s, 1942.	102	102	102
Macon Ry. & Lt. 1st 5s, 1952.	90½	90½	90½
Norfolk & Portsmouth Trac. 5s.	99½	99½	99½
Norfolk Railway & Light 5s.	92	92½	92½
Richmond Traction 5s.	100½	100½	100½
United Railways 1st 4s, 1949.	87½	87½	87½
United Railways Inc. 4s, 1949.	53½	54½	54½
United Railways Funding 5s.	79½	80	80

Miscellaneous Bonds.

Ala. Con. Coal & Iron 5s.	86	86	86
Atlanta Gas 1st 5s, 1947.	100	100	100
Baltimore Electric 5s.	87	87½	87½
Consolidated Gas 6s, 1940.	100	102½	102½
Consolidated Gas 4½s, 1939.	100	100	100
Consolidated Gas 4½s.	92½	93	93
Con. Gas, Elec. Lt. & Power 4½s.	70½	70½	70½
G. B. S. Brewing 1st 4s.	45½	46	46
G. B. S. Brewing Income 4s.	15½	16½	16½
Maryland Telephone 5s.	90	91½	91½
Mt. Vernon-Woodby Cot. Duck 5s.	78½	79½	79½
United Elec. Lt. & Power 4½s.	91	92½	92½

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending August 3.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	81	81
Aiken Mfg. Co. (S. C.)	85	85
American Spinning Co. (S. C.)	145	145
Anderson Cotton Mills (S. C.)	100	100
Arkwright Mills (S. C.)	100	100
Augusta Factory (Ga.)	65	70
Avondale Mills (Ala.)	110	125
Belton Mills (S. C.)	105	110
Bibb Mfg. Co. (Ga.)	114	114
Brandon Mills (S. C.)	125	125
Cabarrus Cotton Mills (N. C.)	110	130
Chadwick-Hoskins Mills (N. C.) Pfd.	100	100
Chiquola Mfg. Co. (S. C.)	124	124
Clifton Mfg. Co. (S. C.)	102	108
Clifton Mfg. Co. (S. C.) Pfd.	99½	103
Clinton Cotton Mills (S. C.)	120	120
Columbus Mfg. Co. (Ga.)	98	98
Courtenay Mfg. Co. (S. C.)	97½	97½
Dallas Mfg. Co. (Ala.)	90	95
Darlington Mfg. Co. (S. C.)	78	80
Drayton Mills (S. C.)	100	100
Eagle & Phenix Mills (Ga.)	125	137½
Easley Cotton Mills (S. C.)	145	155
Enoree Mfg. Co. (S. C.)	69	100
Enoree Mfg. Co. (S. C.) Pfd.	100	100
Enterprise Mfg. Co. (Ga.)	82	90
Exposition Cotton Mills (Ga.)	240	240
Gaffney Mfg. Co. (S. C.)	80	80
Gainesville Cotton Mills (S. C.)	47	56
Granby Cot. Mills (S. C.) 1st Pfd.	45	45
Granville Mfg. Co. (S. C.)	160	165
Greenwood Cotton Mills (S. C.)	90	90
Grendel Mills (S. C.)	111	118
Henrietta Mills (N. C.)	160	175
King Mfg. Co. (John P. Co.)	102	102
Lancaster Cotton Mills (S. C.)	110	125
Lancaster Cot. Mills (S. C.) Pfd.	91	96
Langley Mfg. Co. (S. C.)	91	96
Laurens Cotton Mills (S. C.)	148	148
Limestone Mills (S. C.)	141	141
Loray Mills (S. C.)	85	85
Lockhart Mills (S. C.) Pfd.	97	97
Loray Mills (N. C.) Pfd.	90	93
Marlboro Cotton Mills (S. C.)	80	85
Mayo Mills (N. C.)	165	165
Mills Mfg. Co. (S. C.)	110	110
Mills Mfg. Co. (S. C.) Pfd.	110	110
Monaghan Mills (S. C.)	113	113
Monarch Cotton Mills (S. C.)	102	102
Newberry Cotton Mills (S. C.)	145	145
Norris Cotton Mills (S. C.)	120	120
Olympia Cotton Mills (S. C.) Pfd.	68	68
Orangeburg Mfg. Co. (S. C.) Pfd.	80	80
Orr Cotton Mills (S. C.)	154	154
Pacolet Mfg. Co. (S. C.)	97	100
Pelzer Mfg. Co. (S. C.) Pfd.	165	167½
Piedmont Mfg. Co. (S. C.)	175	175
Poe Mfg. Co. (S. C.)	120	124
Raleigh Cotton Mills (N. C.)	100	100
Richland Cot. Mills (S. C.) Pfd.	55	55
Roanoke Mills (N. C.)	175	175
Saxon Mills (S. C.)	120	125
Sibley Mfg. Co. (Ga.)	60	60
Spartan Mills (S. C.)	135	135
Springstein Mills (S. C.)	100	100
Tecapau Mills (S. C.)	195	195
Trion Mfg. Co. (Ga.)	140	140
Union-Buffalo Mills (S. C.)	54	60
Victor Mfg. Co. (S. C.)	120	134
Warren Mfg. Co. (S. C.)	92	93½
Warren Mfg. Co. (S. C.) Pfd.	100	100
Washington Mills (Va.)	25	25
Washington Mills (Va.) Pfd.	100	100
Whitney Mfg. Co. (S. C.)	106	111
Wisconsin Mills (N. C.)	125	135
Woodruff Cotton Mills (S. C.)	125	130
Woodside Cotton Mills (S. C.)	100	104

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending August 3.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	78	78
Aetna Cotton Mills (S. C.) Pfd.	80	80
Aiken Mfg. Co. (S. C.)	82	82
American Spinning Co. (S. C.)	145	145
Anderson Cotton Mills (S. C.)	75	75
Arcadia Mills (S. C.)	90	96
Arkwright Cotton Mills (S. C.)	100	100
Augusta Factory (Ga.)	65	70
Avondale Mills (Ala.)	107	107
Belton Mills (S. C.)	103	107
Brandon Mills (S. C.)	125	125
Brogan Mills (S. C.)	24	24
Cabarrus Cotton Mills (N. C.)	125	125
Chadwick Mfg. Co. (N. C.) Pfd.	103	103
Chiquola Mfg. Co. (S. C.)	103	107
Clifton Mfg. Co. (S. C.) Pfd.	101	101
Clinton Cotton Mills (S. C.)	100	120
Columbus Mfg. Co. (Ga.)	94	98
Courtenay Mfg. Co. (S. C.)	100	100
Dallas Mfg. Co. (Ala.)	90	95
Darlington Mfg. Co. (S. C.)	75	80
D. B. Converse Co. (S. C.)	112	112
Drayton Mills (S. C.)	100	100
Eagle & Phenix Mills (Ga.)	130	135
Easley Cotton Mills (S. C.)	145	150

Enoree Mfg. Co. (S. C.)	70	82
Enoree Mfg. Co. (S. C.) Pfd.	100	102
Enterprise Mfg. Co. (Ga.)	82	90
Exposition Cotton Mills (Ga.)	235	235
Gaffney Mfg. Co. (S. C.)	70	75
Gainesville Cotton Mills (Ga.)	70	80
Glenwood Cotton Mills (S. C.)	122	122
Gluck Mills (S. C.)	90	98
Granby Cot. Mills (S. C.) 1st Pfd.	50	50
Granville Mfg. Co. (S. C.)	160	165
Greenwood Cotton Mills (S. C.)	90	94
Grendel Mills (S. C.)	112	115
Henrietta Cotton Mill (S. C.)	124	124
Henrietta Mills (N. C.)	103	105
Inman Mills (S. C.)	103	110
King Mfg. Co. J. P. (Ga.)	97	102
Lancaster Cotton Mills (S. C.)	109	109
Lancaster Cot. Mills (S. C.) Pfd.	92	99
Langley Mfg. Co. (S. C.)	92	96
Laurens Mills (S. C.)	150	162
Limestone Mills (S. C.)	140	150
Lockhart Mills (S. C.)	75	80
Lockhart Mills (S. C.) Pfd.	101	101
Loray Cotton Mills (N. C.) Pfd.	90	100
Marlboro Cotton Mills (S. C.)	80	90
Mills Mfg. Co. (S. C.)	100	100
Molloy Mfg. Co. (S. C.)	100	100
Monaghan Mills (S. C.)	112	112
Monarch Cotton Mills (S. C.)	90	90
Newberry Cotton Mills (S. C.)	127	127
Ninety-Six Cotton Mills (S. C.)	115	120
Norris Cotton Mills (S. C.)	90	112
Odell Mfg. Co. (N. C.)	90	90
Olympia Cotton Mills (S. C.)	100	105
Orr Cotton Mills (S. C.)	100	105
Pacolet Mfg. Co. (S. C.)	150	165
Pacolet Mfg. Co. (S. C.) Pfd.	99	104
Pelzer Mfg. Co. (S. C.)	167	175
Piedmont Mfg. Co. (S. C.)	170	170
Poe Mfg. Co. F. W. (S. C.)	125	130
Saxon Mills (S. C.)	118	125
Shiley Mfg. Co. (Ga.)	58	63
Spartan Mills (S. C.)	135	145
Trion Mfg. Co. (Ga.)	132	140
Tecapau Mills (S. C.)	200	200
Union-Buffalo Mills (S. C.) 1st Pfd.	70	70
Union-Buffalo Mills (S. C.) 2d Pfd.	20	25
Victor Mfg. Co. (S. C.)	120	120
Warren Mfg. Co. (S. C.)	90	97
Warren Mfg. Co. (S. C.) Pfd.	102	107
Washington Mills (Va.)	20	25
Washington Mills (Va.) Pfd.	100	105
Watts Mills (S. C.)	101	106
Whitney Mfg. Co. (S. C.)	100	100
Williamson Mills (S. C.)	100	100
Wisconsin Mills (N. C.)	127	127
Woodruff Cotton Mills (S. C.)	120	125
Woodside Cotton Mills (S. C.)	110	110

Reorganization Plan.

